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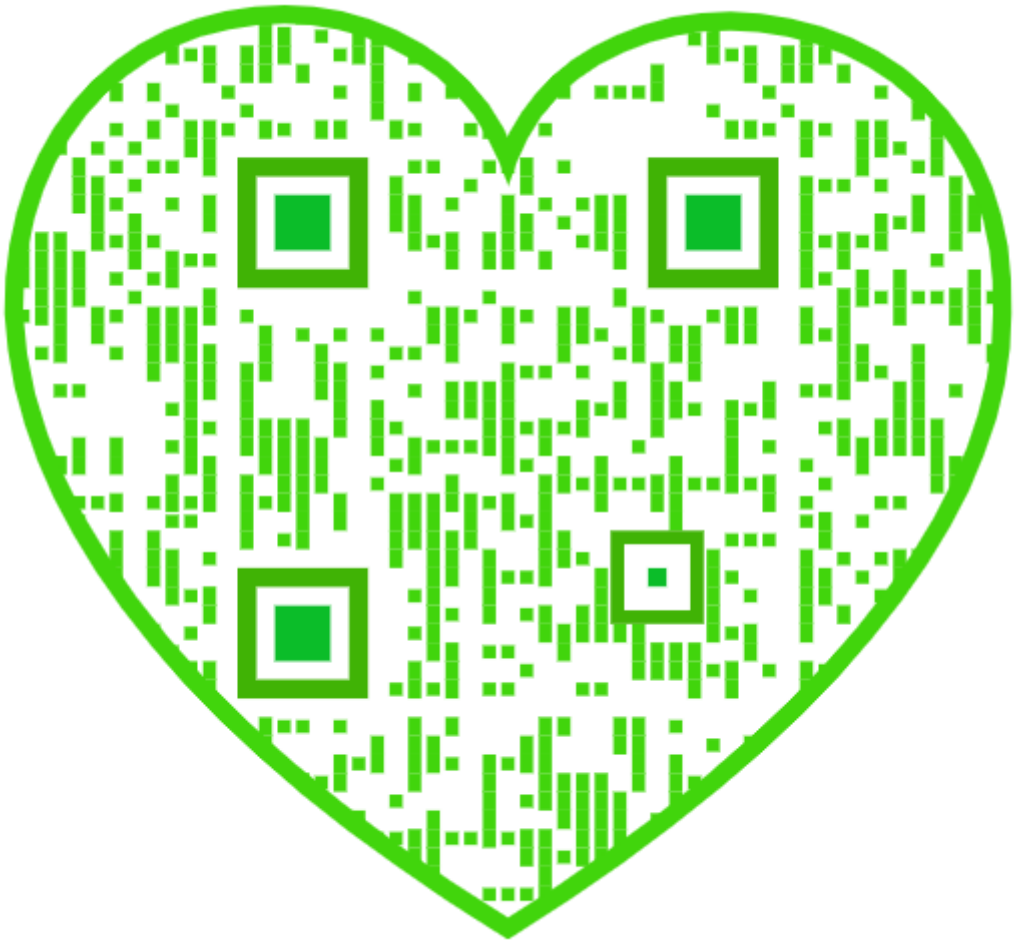

THE AMERICAN

APICULTURIST.

A Journal Devoted to Practical Beekeeping.

VOL. IX. JANUARY, 1891. NO. 1.

SCRAPS FROM MY NOTE BOOK.

If from any cause a colony becomes weak in the fall, I have adopted the following plan to build it up with very satisfactory results:

I usually take off the surplus sections late in the season and in them are quite a number of young bees that cannot well be driven out with smoke, neither will they desert the caps or leave the sections after being placed in the cellar or honey house.

I take the sections in which the bees are clustering to the colony I wish to strengthen, and after first thoroughly smoking the bees in the hive and sections also, I brush the bees off in front of the entrance and they will scamper into the hive as lively as in swarming time, and be readily accepted.

Thereafter young bees can be introduced from any hive without smoking and without any objection on the part of the bees formerly introduced, or members of the old colony, as they have by this time become accustomed to the influx of strangers and accept their presence as a matter of course, for they soon learn that they are peaceably disposed and not there for the purpose of robbing. A few bees from a number of prosperous colonies will never be missed, whereas, if a frame or two is abstracted the loss will be apparent next spring, and the bees in those hives thus robbed of stores and brood will not commence working in the surplus arrangement nearly so soon; not until the loss has been made good. It will not do to borrow from Paul to pay Peter in a wholesale way, at least, that is my theory. One colony in my apiary built up in the manner above mentioned, are, at this writing, as strong as the strongest.

To regulate, and to a great extent prevent an increase by swarming, I cannot too strongly recommend the use of baits in the surplus department. There are in every apiary sections partly filled and uncapped. I place one or two unfilled sections in the surplus apartment, sometime before the approach of the honey flow, or after all danger of chilling the brood is past. By this means bees become accustomed to the surplus department, and need no extra coaxing to induce them to go to work whenever there is anything to gather, very often storing honey therein before filling the brood frames below.

I believe this plan has been recommended before, but I had no idea of its practical value until I put it into practice.

I do know, however, that bees sometimes refuse to work in cases provided with new sections, in which were fastened starters made from the very best material, whereas if unfilled sections had been used, I am satisfied that the result would be different.

Some bees are like the human family—a great incentive to labor must be offered.

A GOOD DISINFECTANT.

The best way to cleanse a foul vault, cellar or bee house, is to take a chunk of unslacked lime about the size of a two-gallon pail, place it in an old kettle or pan and pour boiling water over it, and tightly close the doors or aperture.

The steam arising therefrom will penetrate every nook and crevice and sweeten and purify the air better than any method yet devised, that I have any knowledge of. Try it.

What I have written heretofore bearing upon improved methods of producing honey, and relating to experimental

knowledge gleaned from the field at large, and also based largely upon my experiments, may not prove to be of very great importance to the fraternity, or as interesting to the public as the article going the rounds, and published in a number of western newspapers, entitled, "Why Cats do not Grow Fat."

Madison, Neb. A. C. TYRREL.

SHALL WE EMIGRATE?

From our observations upon the honey resources of our country, it is evident that there must be a radical change in methods, or a change in bees to increase the yield, or beekeeping as a business will be among the things of the past. This applies especially to the eastern states, or in localities either east or west, where a high state of cultivation exists. Where the country is comparatively new, an abundance of wild flowers aid in the general yield. Basswood, sumach and millions of raspberries, of themselves, give an excellent yield. But the destruction of all of these, and the substitution of fruit and clover, makes the yield too unreliable for the patience of the average American. We discover in our Rambles that good localities where the yield has been one hundred pounds, have fallen to forty, and in some instances to only an average of twenty pounds per colony. Where our yields are so light we naturally turn our eyes to a more certain field, and just now the Alfalfa fields of the far west have a charm for beekeepers. For what greater charms can there be than a steady flow, an equitable climate, and a ready sale for the product.

The beekeeper of the east, however, should not despair, for he has around him a plant that would rival the Alfalfa in quality and quantity for the time it is in bloom. Red clover is a forage plant that takes the lead in all highly cultivated districts and the honey flow in the flower is permanent, for in the dryest weather and the most unfavorable season honey is found in the little follicle at the base of the long flower tube. It was hoped for a time that Alsike clover had come to supplant the red, but the red has qualities of soil regeneration that the Alsike can never attain to. And, even if it could, the structure of the flower is such that it would never equal the red in its yield of nectar.

With the end in view to reach this vast field of resource, we should never discourage the improvement in the bee and that bee whether Italian or Carniolan, or any other race that will gather this honey, will be the American bee or the future. The object of this article is to keep this fact in view, that we have an unworked bonanza before us, and we have either got to develop it or emigrate — which shall it be?—THE RAMBLER.

WINTER PLANNING.

MICE IN HIVES—MANAGEMENT OF BEES AT SWARMING TIME.

Oh ! but won't the old wise beekeepers turn up their noses when I rise among them to explain my new half-hatched plans ; well, anyhow new to me.

Perhaps it is because I do not read enough, though I take and read about all the bee-papers, or else, it may be, that you adepts are so busy discussing advanced points that you never have time for instruction to beginners, but I seem to find out my troubles first, and then read something on the subject much later. For instance, last winter we put the bees on the brick floor of the cellar. There was not a rat or mouse hole anywhere, but after a little the rats dug through the plaster, and—just what they did, I shall never know.

Of course, they let the mice in, but I had never read a word about mice in hives, did not know they liked honey, and had no idea a mouse could go in at an entrance, so I rested in peaceful ignorance.

There were no bees about the cellar bottom, but I noticed that sometimes when I went into the bee-cellar, that some one hive would seem to be holding high jinks of some sort, the bees

roaring angrily. I used to stand around looking at the disturbed hive and wonder and *wonder* what the trouble was.

I read everything that came to hand, in hopes to find out, but I was still wondering and looking, when, as easily as possible, I decided to put them out, and let them have their rows in the open air.

When the hives were lifted, I found a great heap of dissected bees under each hinged alighting board. The pile was so large that I was sure the greater part of my bees must be there, in fragments.

Well, the roaring in the hives ceased, and the colonies began to build up again.

Still, I could not learn that a mouse could get into a hive. So I experimented. I put a new hive in the barn, and set grain in it. Bless you! the mice just revelled in the hive. That settled the fact for me, and I made up my mind that I should never leave my hives open again, and have lain awake nights planning some kind of fixture to be covered with wire netting, that I could set firmly before the entrance.

I had my plan complete, but not my mouse-excluder, when a neighbor showed me a drone-trap. And that settled it. It is heavier, firmer, more airy, and better in every way than my invention, to be set in front of the entrance while the bees are in the cellar, to keep out the mice.

If dead bees should clog it, one could lift it, and shake them off without disturbing the colony at all.

Now, Mr. Alley, please score me one point.

With your drone-trap I can catch drones, catch the queen if I am on the watch at swarming time, and also, *keep the mice out of the hives in winter.*

All this I had settled, when I took up a late bee paper, and found a query from some ignoramus like myself asking if mice would disturb hives, and the answer in the affirmative.

I only wonder now, that my colonies were not entirely ruined this last winter.

Beekeepers around here seem to be well supplied with drone-traps but a self-hiver is an unheard-of thing, and a self-hiver is the one thing needed to make beekeeping practical for women.

I believe I asked the APICULTURIST if one ought to clip queens' wings. The answer was a big "No," but I went on clipping. You see, I had *got* to catch the runaway queens somehow.

Well, that settled the first swarm. I caught it. But what of the second swarm that is found to issue from each hive? That's, aye, *that's* the rub.

If some one will show me how to catch that young queen, and how to put the swarm back where it will go to work again, I'll—I'll—yes, I will for a fact, I'll give him a nickel.

Now if, next spring, when I catch my first swarm with a new swarm-hiver—for I must have one—if I put that swarm into an empty hive, and about five days later I cut every queen cell out of the frames in the old hive from which they issued, and hang those frames in the upper story, over the new colony, with a queen-excluder between, will that settle the swarming business for that hive, and will the brood hatch and go down below, while the workers store honey for extracting in the empty combs?

Has anyone ever tried this plan?

There is a revolving query in my mind. Why revolving? Oh! because it always comes back to the same spot. It is this: a neighbor of ours, when I was a child, had five funny box hives. I never saw more; never noticed less. I lived near by for about twenty years. He always had some honey. Query: what did he do with the new swarms?

KIT CLOVER.

[The above queries will be answered later on. —ED.]

DO THE ITALIANS DEGENERATE?

FRIEND ALLEY: —The discussion between you and friend Robbins, carried on in such admirable spirit, is very interesting reading. My prejudices are with friend R. when he says, "I do not

believe that Italians will degenerate into blacks." Yet I will give you a single item of my experience that troubles me.

I have for years kept Italians, bringing in a fresh imported queen every year or two. After keeping that up for a number of years, I reasoned that as there were very few other bees in the neighborhood the Italian blood must predominate so much that if left to themselves my bees would themselves weed out the one-banded fellows. Although I had had no pure blacks for years, I soon found that I had two or three colonies that were simon-pure blacks, at least so far as color was concerned.

Now the question is, did my yellow bees turn black, or were the few surrounding blacks so powerful in character as to overcome?

Marengo, Ill. C. C. MILLER.

LETTER FROM A BEGINNER IN THE BEE BUSINESS.

I thought you would like to hear from our section of the country in regard to bees and honey. This has been a very poor season for honey. My bees have not stored enough honey to winter on, and no surplus. My neighbor beekeepers say the same. During the early part of the season bees did pretty well; I shall have to feed for winter. I have nine colonies of Italians, the best and nicest bees I have are from the daughter of your $100 queen. They are the brightest and largest bees in my apiary.

I am only a beginner in the business; this being a very poor season to commence. I hope by next year we shall have better success with both honey and bee rearing.

GEO. W. SNYDER.

Burket, Ind.

As for the matter of stores left in a large hive after the harvest, that is all fol-de-rol. It will be consumed at the end of the harvest and count for nothing after all.

CHIPS AND SHAVINGS.

INTERESTING NOTES OF PRACTICAL VALUE. CONDUCTED BY E. L. PRATT.

8-frame hives, L size, are plenty large for all purposes.

12½ cents per ounce is a pretty fair price to receive for Hoarhound honey.

It is an easy matter to keep bees but to make them pay is a different story.

How the beekeepers are swinging into line on the winter cases and closed-end frames!

There is no pursuit that can be worked with bees to such advantage as gardening under glass.

I know where there is a remote yard of Carniolan bees that have run to pure bright yellow, unmolested.

The market calls for even a smaller box than one pound. We shall produce honey in 1⅞ sections next year.

I have not the time or patience to look up queen cells in a colony that has swarmed. There is a neater and better way. Use a queen-trap.

The prospects for 1891 are very encouraging, to say the least, since we have been receiving orders for queens about all winter.

Depend upon it that yellow Carniolans are going to lead in popularity another season. I have believed all along that the Carnies would lead sometime.

It is all very well to follow Bro. Joshua Bull's advice in introducing; but suppose we have no colonies with virgin queens, what then? The candy plug method for the novice, tobacco smoke for the expert.

It takes three kinds of smokers to run us in the height of the queen season. A Bingham for all-day work, the old pipe for queen work, and a Clark to burn excelsior for ten-minute jobs. We always use a snap match and can give you smoke in all styles in less than a shake.

Is it not strange that *Gleanings* never heard of Alley's methods of raising queens until this late date? Why does not Ernest come east and give us all a call. Perhaps New England bee-keepers can give a point or two of value.

That discussion of colors and markings is very interesting and instructive to all beekeepers who are in for bottom facts. The subject will stand considerable airing. With the facts we already have, quite a lively debate can be carried on. I shall have to accept the inevitable. "All that glitters is not gold."

Do you really understand what an undertaking it is to publish a *32-page* bee paper *every week*. I do, and can say that the task is an enormous one. We cannot be too hearty in our support of the *old American Bee Journal*, for in its success lies the hope of every man who has a dollar invested in bees. To pass it by would be treason.

With regard to paying big prices for contributions, I would remind the readers that the API seems to receive its share of valuable matter, pay or no pay. I look at the matter in this light; A bee-paper is a sort of reformation Herald for the pursuit, headed by a leader who has the "sand" to man the tiller and keep the forces abreast. We are all stockholders in reality and our dividends are paid monthly or weekly as the case may be. The more real heart we put into it the larger the dividends in valuable knowledge. To the publisher the receipts are small enough at best and for that reason I do not object (rather encourage him) to deal in supplies, etc.

If a comb covered with bees is shaken some distance from the entrance, you will notice that the first bees to enter the hive raise their abdomens and at once commence fanning. If you have ever watched bees in this position, you may have noticed a small brown spot just over the sting sack. It is from this that the young bees find their way. A strong scent is emitted from a quantity of bees in this position, and this scent, coming from under the scale near this brown spot, is fanned back to the rear guards and is quickly answered by a general movement toward the hive. This also accounts for the peculiar actions a lost bee will exhibit upon first finding the entrance. The same manœuvres will be observed when young bees are taking a flight or as a swarm is marching into its new hive.

COLOR INDICATING CHARACTER—DEFEND YOUR COLORS.

The December number of the API has quite a "coloring" on the "color" question in Italian bees. It seems that my article in the *A. B. J.* (page 662) on the "Color and Marking of Italian bees" is bringing some replies and comments, yet they are all one-sided so far; the color extremists keeping quiet. Dr. Tinker's excellent article and your comments fully agreeing with my views, we have so far no one to debate with. If our friends on the "golden" side don't spur up a little and defend their "colors" we might get in the notion of having it all our own way.

The above heading was rather the leading thought in my mind when I penned the article for the *A. B. J.*; or in other words can an expert by simply examining a colony of bees that he never saw before, and by close inspection tell by their markings whether or not they are good comb builders, make much or little use of propolis, cap their combs white or not, whether long or short lived, etc.? This is what I was aiming to draw out a discussion on. I believe it possible to read the character of bees as a phrenologist reads the character of men. Will not Dr. Tinker favor us with an article on this subject?

Waynesburg, Pa. W. S. VANDRUFF.

Mr. G. A. Stockwell favors taking away all honey and feeding sugar stores for winter.

NOTES AND COMMENTS.

Under this head will be included apicultural news and comments thereon.

PAYING FOR PRACTICAL INVENTIONS.

In a recent issue of the API we suggested that brother A. I. Root reward the person who first gave the public the formula for preparing the most practical food for queen-mailing cages, as well as rewarding the person who devised (in Root's opinion) the best shipping cage.

The following editorial extract bearing upon this matter is from *Gleanings* of Nov. 15.

"The *Apiculturist* for November suggests that, while we are giving friend Benton $50.00 for his queen-cage for long distances, we should remember I. R. Good, who gave us the idea of pulverized sugar and honey for the "Good candy" for said cages, and that even the Benton Cage would be worthless without this method of provisioning it. All right. We do not know of anybody to reward whom it would give us more pleasure for his work than our *good* friend I. R. Good. We place to his credit $25.00 for what he has done in helping us to mail queens safely."

It is all right for Brother Root to "sling" his money around in any way he pleases, but the person entitled to the reward for the best mailing cage food is not I. R. Good, by any means. What we said was this:

"Mr. I. R. Good first mixed granulated sugar and honey, but that was a poor food for shipping cages, and not as good as sponge and honey. I found that the bees would use the honey, and leave the dry grains of sugar to rattle about the cage, which would catch in the screen wire used for ventilating the cages, thus stopping out all air and killing the bees in some cases; where powdered or pulverized sugar and honey are used, the bees consume all, and none is left to rattle in the cages."

Bro. Root is wrong again. If my memory serves me correctly the man who first gave the public the *pulverized* sugar-and-honey food was located somewhere in the state of Texas. I cannot give his name. At any rate, the first powdered sugar-and-honey food I ever saw came from this man. A queen was sent us, and the food seemed so nice, the bees so clean and bright, that I at once wrote the shipper for the formula for preparing the food.

It is the "best honey and pulverized sugar, kneaded for a long time. The longer the kneading the better the food." And so we found it. I put about five pounds of sugar in a large pan, and then about one pound of *best* honey. Then knead for an hour. If more honey is needed it is added, and the same of sugar. No glycerine, flour nor anything but sugar and honey is necessary to make the best and most wholesome bee-food. By the way, have any of our readers seen Mr. A. E. Manum's formula for this kind of food? Mr. Manum uses glycerine in its preparation. Brother Manum does not seem to know that glycerine contains more or less arsenic, a rank poison. I should hardly dare to ship a valuable queen on food that contained arsenic. Why fuss and bother to make such food as Manum recommends and describes, when the powdered-sugar food is so much superior in all respects?

KEYING-UP SECTIONS.

In commenting on a bee-book, brother A. I. Root says:

"HOW I PRODUCE COMB HONEY"

is the title of a new edition of that little work by George E. Hilton. We notice he has introduced keying-up in T supers. A good idea, friend H. The time is fast approaching when all beekeepers will demand that their sections be wedged up tight, to prevent propolis from being deposited so freely.

I found out this thing more than six years ago, and to meet this point devised the section case now used in the BAY STATE HIVE. This case is so constructed that the bees cannot soil the sections, and every one comes off the hive as clean as when first put on. Then again, the case was designed not only to keep all the sections clean, but also

to keep the sections in a perfectly square position while on the line.

HOW TO MAKE A SOLAR-WAX-EXTRACTOR.

Mr. G M. Doolittle describes in a late issue of *Gleanings* his way of making a SOLAR-WAX-EXTRACTOR. Brother Root seemed to think it most too fussy, and to have too many pieces, and so gave his way of making a wax exterminator which is as follows:

"You will see by the engraving above, friend Doolittle, that we have made a little neater job. There are fewer pieces; being dovetailed at the corners, it is stronger; the glass-frame is easily removable, and the whole thing, when covered, is complete without any projections, save the supporting legs to hold it at an angle towards the sun. The size is a trifle different, as we made ours to take a 14 x 28 glass—a size that can be obtained at any hardware store.

Now, friend Doolittle, instead of going to work and giving so many pieces of so many different sizes, I would recommend the one who contemplates its construction to make a plain box whose inside dimensions shall be 14 inches wide, 29 inches long, and seven inches deep. The sides of said box (not the ends) are to be rabbeted $\frac{7}{8}$ deep and about $\frac{1}{2}$ inch wide to receive the glass-frame. The cover should be a similar box, but only $1\frac{1}{2}$ inches deep, of the same dimensions otherwise, and is likewise rabbeted on the side rims. You will thus observe that the glass-frame 29 inches long and $14\frac{7}{8}$ inches wide can be let down into the rabbet into the box, and that the cover slips over the whole thing, and makes a complete and neat box. The legs are $17\frac{1}{2}$ inches long, and are pivoted with a screw, as shown in the engraving. The dovetailing is not essential, but as it costs us no more we make it so.

The pan is simply a trough made of Russia iron, one end of which is closed up, and the sides are bent over a little bit so as to rest on the rabbets in the sides of the box. The wire screen is fastened about $\frac{2}{3}$ of the way down, as shown in the engraving, or just far enough to admit of a Langstroth frame. I would suggest that in telling how to make a hive or any other similar box, we give its inside length, depth and width, and he who constructs it can then with less mental effort tell how to make it.

I have carefully tested your solar-wax-extractor, and feel very sure it is very much superior to the one we have formerly advertised. It doesn't clog up, and the wax, when it melts, runs down an inclined plane, runs through the screen, and finally into the pan, and the pan is allowed to stand in the direct rays of the sun; the wax is kept liquid during the entire day, so that all foreign substances will settle to the bottom."

These wax extractors are coming into use more and more each year. I shall give them a thorough test the coming summer.

FOUL BROOD.

Our Canadian friends are making a great fuss about foul brood. I wonder if the McKinley bill will, prevent the importation of foul brood into this country from Canada. If it will, beekeepers, if no others, will be benefited by the new tariff bill.

It seems that some enterprising beekeeper in that part of America called Canada has discovered a wonderful remedy for the cure of foul brood. The remedy has been printed and sent, or is said to have been sent, to all the bee-papers in America, that is, those bee papers published in the United States. A copy of the work was sent to us by a friend. The President of the Ontario Beekeeper's Association did not consider the API worthy his attention, and so none came to us from him. This Mr. President of the O. B. K. A. well knew that our remedy for foul brood is far superior to his, and, knowing our views on this point, we were passed by when that wonderful remedy was sent around.

For one, *The American Apiculturist* is too much "exalted" to listen to any

one, when they have a foul brood remedy to thrust upon the bee public.

The Canadian remedy, so far as we are acquainted with it, is worse than the disease. No: Americans want no remedies for foul brood from any one. When American beekeepers have that disease in their apiaries they know how to rid the hives of it. It is done in the easiest, cheapest and most expeditious manner.

Some of our Canadian friends, particularly the president of the O. B. K. A., are mad clean through because *all* the American bee-papers did not publish in full that long sermon on foul brood.

Allen Pringle, the president referred to above, lets go his pent-up feelings as follows:

"Now 'brethering' (I mean ye three editors, and doubtless all present), please bear in mind that this is not meant for an attack on you or your periodicals. I attack Brother 'Jonathan,' for I suspect he is to blame. That tremendously big brother of ours, armed with the 'McKinley Bill' is just now straightening himself up in our presence and giving us a withering glance—'on the slant.' These 'sovereign' citizens of his have no doubt caught the infection, and naturally enough imagine that 'no good thing can come out of Nazareth,' or Canada.

Be that as it may, I repeat and reiterate, for the benefit of whom it may concern, that we have practically solved the foul-brood question in Canada—that is, so far as its successful treatment is concerned, and that, of course, is the main point; and we shall charge you nothing for the information of how it was done. Though you may be unwilling to import the 'furrin' aricle without a tariff or McKinley-tax, we shall nevertheless smuggle it in to you by 'Her Majesty's mail' and 'Uncle Sam's post."

Brother Newman of the *A. B. J.* comments on the above in this style;

"The imputations that the 'tribunes'—the 'great guns' *i. e.*, the editors of the bee-periodicals, we suppose—are too much 'exalted' (in their own estimation, of course) to listen to advice from Canada, is absurd, and beneath the dignity of 'the President of the Ontario Bee-Keepers Association'."

Brother Newman got a little frightened at the President's remarks and published the whole thing in the *American Bee Journal* of December 9. We think our columns can be filled with more interesting and valuable matter. American beekeepers seem to keep their end up pretty well, and we do not often have to go over the line for any information concerning bee culture.

PREVENTION OF AFTER-SWARMS.

Kit Clover, and a good many others who keep bees, would like to know how to prevent or control after-swarming. We have found it the easiest thing in the world. Our practice is to destroy all the queen cells at any time within three or four days after the swarm issues. When the cells are worth preserving, they are transferred to nucleus colonies and the queens are reared. A young queen is introduced to the colony and there is no more swarming from that hive that season. Perhaps we should have said that when further increase is not desirable or we had no use for the new swarm, the bees are put back into the hive they issue from, while the queen remains in the trap.

If a strange queen is introduced, it may be done by the cage system, or by fumigating with tobacco smoke. If by the former method, the cage may be placed upon the frames, or what is still better, inserted at the bottom corner of one of the brood frames.

Kit Clover's plan of cutting out the queen cells and then placing the brood and other combs over the new colony with a queen-excluder between the two hives, is good, but not new. Dr. G. L. Tinker we believe was the first beekeeper to advance that method.

Of course, if this plan is adopted by any one, we see no way so good to manage to obtain surplus honey as by

using the extractor. Would suggest that before the transfer of the brood to the new colony, that as much as possible of the honey in the brood combs should be extracted. The whirling of the combs in the extractor to throw out the honey, would be likely to destroy any queen cells that escaped the eye when the combs were examined.

There is another suggestion I will make here. It is this. Do not wait five days before making the transfer of brood combs from the old hive to the new one. Do it late in the afternoon of the day the swarm issued. The young bees will go down into the bottom hive after a while. In two weeks from the day they leave the combs the young bees will be in the fields gathering pollen and honey.

MICE IN BEE-HIVES.

Mice sometimes get in the hives during the winter. The best evidence that some stray mouse has taken up his abode in a bee hive is by the small pieces of comb and headless bees found at the entrance of the hive.

Hives that set near the ground and have an entrance, or ventilation large enough for mice to crawl through are the ones most likely to be infested with vermin.

Mice will eat the heads off dead bees and the pollen found in the combs. Never knew them to trouble honey when there is anything else for them to subsist upon.

WINTER CARE OF BEES.

The only care bees need in winter is to be let alone. This of course applies to such colonies as are in good condition for winter. After bees have been confined in the hives several weeks, many will sally out in the middle of the day for a flight if the sun strikes the front of the hive, and hundreds will perish on the snow. To prevent this a wide board should be leaned against the front of the hive to keep out the heat and light of the sun.

PERSONAL AND OTHER NOTES.

By E. L. Pratt.

Dr. Miller has turned an editor.

Dr. Tinker was called back to practice during a recent epidemic in his town.

Mr. H. R. Boardman has gone on record in favor of three-eighths spacing of brood combs.

Mr. M. D. Fisher gave a very vivid description of his first experience in introducing queen bees in a late issue of the *A. B. J.*

The leading gardener-under-glass in this part of the county uses over one hundred colonies of bees to work in his green houses.

Over fourteen columns of solid printed space was consumed in the *A. B. J.* telling how to cure Foul-brood. One word would have given a cheaper and safer method—cremation.

Brother Newman should allow Mr. Clark to defend himself. It is a shame that a discussion can not be carried on without going into rank personalities. It is not just nor Christian-like.

Where is our old friend Kelley of *Siftings* fame? Why do not some of the young men and women who are somewhat advanced in Apiculture step up and tell us what they have learned by experience?

Dr. Searles of Worcester, Mass., is the possessor of five hundred colonies of bees. At the Convention in Ploughman Hall, Boston, Dec. 13, he said that he used a modification of Dr. Tinker's hive, and that four tons of honey were produced last season. At one hotel he sold half a ton. Most of the honey was sold in New York at twenty cents. The Doctor agreed with my remarks with the exception of one point and that was feeding to stimulate brood-rearing in spring. Should judge by his remarks that he fed a little too much.

OUR NEW IMPROVED AUTOMATIC SWARM-HIVER.

Sometime ago it was stated in the Api that we had so improved the self-hiver that it would prove successful in hiving ninety-nine per cent of all swarms issuing from hives where the hiver is used.

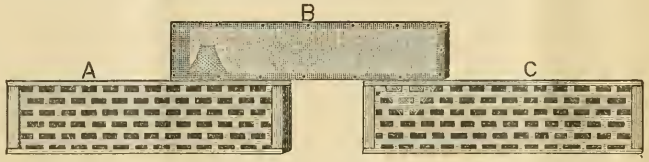

Fig. 1.

During the swarming season of 1890 we began to experiment with various devices for hiving swarms of bees automatically.

The self-hiver sold in the season of 1890 failed to self-hive *all* the swarms that issued through it. The queen could not seem to find her way through the end of the cone-tube as readily as she does the one in the drone-and-queen trap. We saw at once how to remedy the trouble. The SELF-HIVER here described and illustrated is the result of the experiments conducted in the year 1890. Figs. 1 and 2 give the reader some idea of how the improved SELF-HIVER is constructed.

When a swarm issues the queen is checked at the entrance by the queen-excluding metal in Box A. The worker bees have no difficulty in passing the perforations and going into the air as they usually do when a swarm issues. But the queen being much larger cannot pass the metal to take wing and join the swarm as they do when no trap is used. When the bees find they have no queen with them they at once return to the location from which they started. In the meantime a few young bees have found their queen in the trap C and all the bees of the returning swarm join her and enter the new hive.

When the bees start to swarm the queen comes out into box A and readily finds her way up into box B, and then down through the cone-tube in box C. When she has once passed through one of the tubes she cannot return.

By the time the queen has found her way into box C the bees have missed her and return to the old location and hive themselves.

The reader, of course, understands that box A is placed at the entrance of the hive from which a swarm is expected. Box C is placed at the entrance of the new hive, or at the entrance of the hive the new swarm is to occupy. The two hives are then connected by placing box B upon boxes A and C as shown in the illustration. All outlets to the hives except those through the metal must be closed to prevent the queen from taking wing and joining the bees.

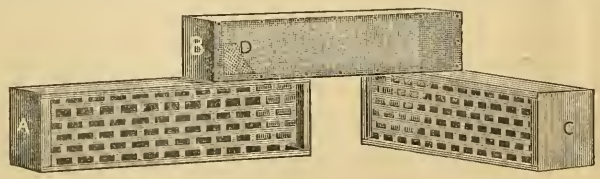

Fig. 2.

If the Swarmer is used as illustrated in fig. 1, the new hive must be placed at the side of the one the bees are in. If used as shown in fig. 2, the entrance of the empty hive may be at right an-

gles with that of the parent or home hive.

The Swarmer as now made is not adapted to all styles of hives in use. In some cases it will be necessary to make some slight changes in its construction. For this reason we advise all who wish to use the Swarmer that the better plan is to buy an individual right to make and use them. Then get out a model of the Swarmer and send to the nearest supply dealer for your goods providing of course he can supply them.

Will say to those who purchased the Swarmers sent out last year that they can easily be altered to the new style. Write for particulars.

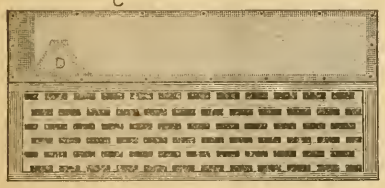

Fig. 3.

The Self-hiver may also be utilized as a queen-trap. Place box B upon box A as shown in fig. 3, and you have a complete drone-and-queen trap.

Prices of the new Swarmer can be found on another page.

Bee-escapes have received a good deal of attention of late in some of the bee-papers. The API has taken no part in the controversy as we felt sure that the whole thing would have a short run. Brother Dibbern devised the best escape of any we saw described. I do not know of so good a way to get bees out of sections as by placing the cases when they are removed from the hive, in a room having but one window. That windowis best when in a door. The bees are attracted to the light, and occasionally opening the door soon rids the house of all of them. By this method the bees leave the section without picking into the capping of any of the combs. We have sometimes placed a caged queen just over the window, and find most of the bees clustered thereon.

AMERICAN APICULTURIST
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EDITORIAL NOTES.

A Happy New Year to all our readers.

Doesn't the API come up bright and rosy this cold January morning?

Brother E. L. Pratt had a hand in giving the API the improved condition in which it appears in this issue.

The G. B. Lewis Co., of Watertown, Wis., have devised an all wood queen-excluding honey-board which they claim is superior to others in use.

Bee-Hive has sold out to the W. T. Falconer Mfg. Co. This reminds us of the sale of an Express Company that did business hereabouts a few years ago. They sold out. All the visible property they had was an order slate that hung in the Post Office, and was worth about ten cents.

By the way, where is the *Western Apiarian?* Has that been swallowed up by some enterprising party? Poor thing! it struggled hard for an existence, but we think it was no go as it is a long time since we saw a copy of it. The paper and press-work were too miserably poor to make the publication attractive. Bee-papers, like the seasons, come and go, and no one seems to miss them.

Brother Root says every beekeeper should subscribe for the *American Bee Journal.* That's just what we have been saying for a good many years. Somehow we manage to keep ahead of Brother Root in most everything except in rewarding cash presents to those bee-keepers who invent or devise bee fixtures. We don't have the money to put out in that line.

Brother C. C. Miller who is now editing "Stray Straws" in *Gleanings* quotes

Alley and the Api no less than six times in a recent issue of that paper.

If there is a beekeeper in this world who knows a good thing when he sees it, that fellow is Dr. Miller. The Doctor knows just where to look for valuable and original points, as well as facts. The Api is published for that purpose.

The editor of a bee-paper who says editors and publishers of other publications should not deal in supplies, ought to apply that advice to himself. Doing business through a brother may do in his case, however. When the Api was started, it was the intention of the editor and proprietor not to deal in supplies. This did very well as an experiment, but it did not prove a success. Brother Newman tried it for a while, we believe, but it was a failure.

If bees can be successfully united by dredging them with flour, then we shall have to credit our English friends with doing something with bees that we Americans have not.

We never dredged with flour before uniting, but have used flour without good results after the bees commenced to kill each other We think there is a much better way to unite bees than the flour process. The method was given in a recent issue of the Api.

The roaring heard in a hive in the winter does not always indicate that something is wrong with the bees. Sometimes bees consume all the stores within reach of the cluster and it is necessary for them to move into another part of the hive for their food. When this takes place, a roaring noise in the hive will be heard. The whole colony must be aroused, warmed up, and got ready to take up the line of march. Hence the roaring noise that is sometimes heard.

Brother MacPherson, editor of the *Canadian Bee Journal*, has given Rev. W. F. Clark a very hard rubbing in the *A. B. J.* We regret that Editor Newman will not permit Rev. Clark to reply, as the matter now stands, brother Clark's position is in a bad plight. Let 'em have it out, Brother Newman.

This little unpleasantness seems to have started from a quotation brother M. made from the Api regarding the matter of paying for copy. The *Canadian Bee Journal* endorsed our remarks. This was too much for our Reverend friend. Hence the personal controversy.

It won't do even for a Canadian to throw mud at D. A. Jones as long as brother MacPherson has editorial charge of the *C. B. J.* Brother M. seems to be as efficient with his pen as John L. Sullivan is with his fists. John L., you know, cleans 'em all out.

PRICES OF QUEENS TO SUBSCRIBERS OF THE APICULTURIST.

We beg to remind all subscribers to the Api that they can get one of our best *select Italian queens* by remitting seventy-five cents at the time the queen is wanted. The regular price of such queens is $1 25.

If any subscriber prefers one of our *select golden Carniolan queens*. the same as we charge $2 for, one will be sent for $1 25, or, the two queens and the Api will be sent for $2.50. The queens may be ordered and paid for when wanted. No queens will be mailed before May 20, 1891.

THE DRONE-AND-QUEEN CONTROLLER.

If any subscriber desires to examine one of our improved Drone-and-queen Controllers, we will mail it for thirty-five cents, or, the Api and Controller for $1.10.

The Api and one of our improved Self-hivers will be mailed for $1.50.

TO SUPPLY DEALERS.

Supply dealers have found that it pays to advertise in the APICULTURIST as our well-filled columns amply testify. We have found that advertisements are read and generally answered by those who send for sample copies. We get calls by each mail for from twelve to fifty copies of the Api We mail them at once. Besides, our friends are continually sending us names of live beekeepers; to such, a specimen copy is at once mailed. This is why it pays to advertise. Hundreds of new beekeepers read the Api each week.

QUESTIONS AND ANSWERS.

FEEDING SUGAR-AND-HONEY FOOD IN WINTER.

Acworth, N. H.

MR. ALLEY: How would it work to pack a frame with pulverized sugar-and-honey, such as you use for queen cages, and insert it in the hive for winter stores.

JOHN GRAHAM.

I think it would work well, provided the food is placed within easy reach of the bees. A frame not less than two inches wide should be made, one side entirely covered with thin boards. The other side should not be wholly covered; space should be left at the top for placing the food in, also for a passage-way for the bees to reach the food.

The frames should be made sufficiently large to hold at least ten pounds of food each.

The brood-nest should be contracted to about four or five frames, and the food placed at the sides of the hive with the open part of the frame next the combs. If this is not done the colony would be likely to perish before spring, as the bees would not pass over the wide frames for stores.

A colony properly packed for winter with plenty of stores of the above kind, will no doubt winter well even on the summer stand.

HOW THREE FINE QUEENS WERE LOST.

Lawrence, Mass.

MR. ALLEY: I used the three queens you sent me to replace three old ones. You can judge how surprised I was to find all three had been destroyed. I introduced them in the following way: The cages the queens were sent in were placed on the frames, thinking by the time the bees could remove the food and release the queens, they would be all right. But I got left.

CHAS. E. DOW.

Yes, you got left and so will all others get left who undertake to introduce queens in that way. We take it that the queens were placed on the frames at the time the three old queens were removed. Now had a small amount of tobacco smoke been given the colony at the time the cages were placed on the frames, there would have been no trouble. Strange queens cannot be introduced to colonies just made queenless without in some way disguising their identity. Tobacco smoke will so nicely odorate the whole colony that the bees will not know one bee from another in the same colony. Try the above method of introducing and you won't get left.

INTRODUCING A NEW QUEEN AT THE TIME A SWARM ISSUES.

Salisbury, N. C.

FRIEND ALLEY: I want to tell you how I intend to introduce some queens; will have the queens on hand and when a swarm issues, place the old hive on a new stand, remove all queen cells and let the new queen run in. How will that do?

J. D. FISHER.

It will not do. You will "get left" as badly as did friend Dow. Place the caged queen on the frames, use some tobacco smoke and let the bees release her by eating out the food. Try it.

ANOTHER BEEKEEPER IN TROUBLE.

Milford, Pa.

FRIEND ALLEY: I am having hard luck with my bees. They kill the young bees as soon as they hatch. Why is it that they do so? I have four colonies that are up to this sort of business. What shall I do with them? Wish you would tell me.

RUSLIN DEWITT.

Evidently some new disease has got a foothold in friend DeWitt's apiary. If the bees are in, or rather were in fairly good condition as to numbers, stores, etc., it would be advisable to requeen the colonies and apply the salt remedy as advised in the API. If the colonies are too much reduced in numbers to build up readily, it would be the better plan to brush all the bees from them and preserve the combs for other uses.

It may be that friend D. is mistaken about the young bees being destroyed. It seems to us that the trouble is that the colonies are afflicted with the nameless disease. If so, by all means apply the salt remedy. Dissolve a teaspoonful of salt in one gill of water and add about one gill of honey; remove the honey-board or whatever covers the

frames, and then turn the mixture over the bees, frames, combs and all. This will compel the bees to get a taste of the medicine, and will end the trouble.

THE QUEEN-TRAP—USING FOUNDATION IN THE BAY STATE HIVE—THE SELF-HIVER.

Clarence, Iowa.

MR. ALLEY: Please answer the following questions in the API.

1. When your queen-trap is on a hive and a swarm issues in your absence what do you do?

2. Do you use foundation in the brood-frames of your Bay State bee hive.

3. Will your B. S. Hive winter bees as well as a cellar in northern Iowa?

4. When your self-hiver is used how many days after the first swarm issues can it be removed?

SCOTT MCNEIL.

1. We usually let the queen return to the hive and if a swarm issues the next day as they usually do (and if we are at home) the hive is opened while the bees are in the air and *all* the queen-cells removed or destroyed, the bees are then allowed to return. No more swarms will issue from that hive for four days at least, providing all the queen-cells were removed.

2. Certainly we use foundation in our Bay State Hive. We also have as good a method of fastening it in the frames as can be devised.

It requires no melted wax or foundation machines to do the work.

3. Yes, the B. S. hive will winter bees better than any cellar or cave used for that purpose.

4. It is not safe to remove the self-hiver, nor the queen-trap in less than *twelve* days after the first swarm issues. Both should be removed then, to give the young queen a chance for a flight to mate and become fertile.

A CONUNDRUM.

Big Creek, Ga.

MR. ALLEY: Can you answer this question? A beekeeper was passing my apiary the other day, and I was telling him that I intended to send north for some Italian queens. He said "Never; always send south for queens." Please give me the philosophy of it as he did not.

WM. GLORE.

That fellow is one of the know-it-all kind. We will wager two to one that that fellow never saw a bee-paper, and that he does not even know there is a publication of the kind in existence. Call him a crank, Bro. G. and let it go at that.

APICULTURIST MAIL BOX.

ENJOYS THE API.

Cochituate, Oct. 21.

MR. ALLEY: I notice in the API to those who renew their subscription at once you will send the journal, *Thirty years among the Bees*, and the *Directory* for $1.25; enclosed please find that amount. I enjoy reading the API very much; there is always so much in it that seems to be just what I am looking for.

MRS. W. H. BENT.

WHAT ONE COLONY DID.

Gaylordsville, Conn.

MR. ALLEY: Inclosed find seventy-five cents for one of your queens from that one-hundred dollar mother we have heard so much about. If they are better than one I raised from the queen I had of you two years ago, I *must* have one.

The above mentioned queen is one year old. Her colony did not swarm, but have filled nearly one hundred and twenty one-pound sections and are still filling. They are large, finely marked, and very gentle, and when not working, are very quiet.

THOMAS D. FLYNN.

THE BEST QUEEN HE EVER HAD.

Springville, N. Y.

EDITOR API: I have a queen I got of you two years ago that I consider the best queen I ever had.

L. F. BROWN.

BETTER THAN HE EXPECTED.

Burket, Ind.

H. ALLEY: Queen received all right. She is a daisy; larger and nicer than I expected to get.

G. W. SNYDER.

TWO SWARMS CAUGHT.

Shirley, Mass.

FRIEND ALLEY: I hived two swarms with your Self-hiver.

F. E. MERRIMAN.

HIVED THREE SWARMS.

Revere, Mass.

HENRY ALLEY: I hived three swarms this season with your automatic Swarm-hiver. I am away from home all day and found the swarms self-hived when I returned at night. FRANK H. PRESCOTT.

TOO SCIENTIFIC FOR HIM.

Payson, Ill.

MR. ALLEY: Please send queen and "Thirty Years among the Bees." I have ——— on queen rearing. It is too scientific for me.

DANIEL E. ROBBINS.

MANY POINTS FROM THE API.

Unionville, Mo.

MR. ALLEY: I get many points from the API that are valuable to me. Although three other bee-papers visit me regularly, I find your journal of more practical value than all the rest.

E. F. QUIGLEY.

ONLY ONE POOR QUEEN.

San Buena, Cal

MR ALLEY: Herewith find cash for half-dozen queens from your $100 queen. We have had a good many queens from your apiary and but one inferior one.

L. MERCER & Co.

The following is from one of the best writers on bee culture and a successful beekeeper.

WHAT IS SAID OF THE APICULTURIST.

"Please send to the above address a sample copy of the API. He wanted me to name the best bee-paper."

Another beekeeper and an old veteran in the Rebellion writes as follows:

"I am taking three bee-papers beside the API and must say of all the bee journals I have read the API comes most direct and gives the clearest ideas in the fewest words and is the most reliable."

OUR HUNDRED-DOLLAR ITALIAN QUEEN BEE.

Bear in mind that each subscriber to the APICULTURIST is entitled to one of the best queens reared from our one-hundred-dollar queen, by remitting seventy-five cents when the queen is wanted.

This queen now has one of the finest colonies of bees we ever saw.

She is strictly pure, good disposition, and working qualities that cannot be excelled by any bees in the world.

ALL THIS FOR ONE DOLLAR AND TWENTY-FIVE CENTS.

Desiring to increase the subscription list of the AMERICAN APICULTURIST, we make the following unusual liberal offer: We will mail the above paper from Dec. 1, 1890 to Jan. 1, 1892, and to each subscriber will be mailed one copy of our new book on *Queen-rearing*, "*Thirty Years Among the Bees*, also a copy of the *Beekeepers' Directory*, all for the small sum of $1.25. Here are 350 pages of solid, practical facts concerning bee culture, at a cost per page of less than $\frac{1}{3}$ of a cent.

The two books contain all the information on beekeeping anyone need possess from purchasing the first colony of bees to producing honey by tons and rearing queens by the thousands. Every part of bee culture is treated in a practical and thorough manner by one who has had thirty years' experience in beekeeping.

The APICULTURIST has been issued monthly the past eight years and is considered by competent and experienced beekeepers as one of the most practical publications devoted to bee culture.

THIRTY YEARS AMONG THE BEES.

Below is given A. I. Root's opinion of this book:

"This is the title of a new book, written by Henry Alley, of Wenham, Mass. It contains 80 large pages, and is full of good things. In fact, we are ashamed to say we did not even know that friend Alley had got his queen-rearing down to such perfection, for this is what the new book deals with principally.

Toward the end of the book there are a great many good things; for instance, how to find a fertile queen; how to warm a small bee room economically; best fuel for smokers, and several other items that smack pretty strongly of long experience."

THE DRONE-AND-QUEEN TRAPS. REDUCED PRICES.

We have received from the factory a large number of drone-and-queen traps. If any one is disposed to purchase them at this time we shall sell half dozen in flat, one made, seven traps in all, and give the purchaser an individual right to manufacture the traps for his own use for the small sum of $3.00. If you wish one dozen traps (13) and individual right, we will ship them for $4.00. Those who purchase fifty traps, price $10, will get an individual right to make the traps, also the API one year free.

Now let me tell you something all of you, or many of you, do not know about; at least nine out of every ten persons do not. Do you know that you can sell any or all the traps you purchase of us in any place in the United States where the territory is not sold? You can come into our town and sell these traps if they were purchased of us in the first place.

Now if we sell you one dozen traps (13) you can sell every one of them for 50 cents each. This will be $6.50. You then have the right to make all you can use in your own apiary.

Those who have an individual right to make the traps, can obtain the material for them from their nearest dealer. A person who owns a right to use and manufacture a patented article has the right to get his goods manufactured just where he selects. So you see it will pay you to purchase an individual right in any case, as by so doing you can more than save the price of it in express charges on one dozen traps.

We want agents to sell the traps in every county in the United States; also agents to introduce the Self-Hiver into every apiary in America. Pay liberal.

IMPORTED QUEENS.

In May and June, each,	$2 00
In July and August, each,	1 80
In September and October, each	1 40

Money must be sent in advance. No guarantee on shipments by mail. Queens sent by express (8 at least), which die in transit, will be replaced if returned in a letter.

CHAS. BIANCONCINI, Bologna, Italy.

GOLDEN OR YELLOW CARNIOLANS.

The "coming bee" is here. If you want bees possessing all the desirable points, send an order at once for one or more young queens of this wonderful new strain of bees. We cannot say too much in their praise. They are beautiful, gentle, the best honey gatherers, and winter as well as the best Carniolans. The queens are large, prolific and easily found on the combs.

We are constantly making improvements in our ways and means of breeding, and can assure you that you will get none but first-class bees and queens from us. We spare no pains or expense to produce stock that you can exhibit to your friends with pride.

Pratt's Patent Section and Frame Clamp is the best thing yet devised for compressing sections or closed end frames. They are adapted to any style hive and can be attached in a few seconds. Send for a sample by mail, 15 cents.

Our full price list of bees and supplies will be mailed you on application. It contains illustrations and explanations of the leading implements used by modern apiarists. Our goods are of the finest class and the workmanship is perfect.

We have a book giving our new system of Nuclei Management, which we send by mail for 10 cents.

We also have two little books: one on Queen-Rearing, the other on Honey Producing, at 5 cents each, by mail.

E. L. PRATT.

PRATT BEE FARM, *Beverly, Mass.*

Alley's Automatic Swarm-Hiver.

Easily applied to any style hive in use. Will catch and hive 99 per cent. of all swarms that issue. Can also be used as a trap for destroying useless drones.

TERMS AND PRICES.

THE SELF-HIVER will be sold only to those who purchase an INDIVIDUAL RIGHT to manufacture for their own use. An individual right entitles the purchaser to make and use all the SELF-HIVERS desired; but not to sell. The holder of an individual right can also get his Swarmers made in any place he chooses.

If any one desires to manufacture and sell the SELF-HIVER, we are ready to dispose of TOWNSHIP AND COUNTY RIGHTS at a low figure.

An individual right to make and use the SELF-HIVER will be sold for $5. Sample Hiver shipped by mail free to the purchaser.

We shall have the SELF HIVER for sale, made up, or in the flat to all who purchase an individual right.

Per dozen,	$3.50
Per fifty,	12.00
Per hundred,	22.00

Sample Self-Hiver by mail, $1.00.

H. Alley, Wenham, Mass.

THE AMERICAN
APICULTURIST.

A Journal Devoted to Practical Beekeeping.

VOL. IX. FEBRUARY, 1891. NO. 2.

HOW TO MAKE A SUCCESSFUL BEE-KEEPER.

The Api does indeed come up bright and rosy, and has a warming and cheering influence upon a fellow who is often interviewing his thermometer and finds it registering twelve degrees below zero. And after reading it carefully through in our cosy study, ads. and all (we always read the ads.), we've got to say something or h—— do the other thing, talk about success.

During our experience in the keeping of bees for profit, we have seen so many failures, that our reflections this morning run into the above theme, and as we enter the new year, a thorough self examination leads us to the examination of our own failures, and we trace our own and much in the failure of others to one source, which may be expressed by one word, application.

There is probably no business that requires closer application to make it a success than bee culture.

And at first view there is no business which seems so well adapted to take care of itself. Theory says here is your hive of bees, set it down in the garden among the posies, put on the boxes in the spring, and in the fall take them off well filled with honey. Practice and theory may agree with one swarm, but when the apiary grows to one or more hundred swarms, theory and practice grow more and more divergent and the theory that works well with one, will destroy the hundred. We have many times seen both old and young people read a book upon bee culture and then gaily waltz right into the business just as confident of a golden success, as though the book was equal to the lamp of Aladdin and all they had to do, to rub the leaves and take in the treasures.

Now it is no secret but it seems to be hard to learn that success in any business is a thorough application to that business, and according to our view intense application must be applied to bee culture to make a thorough success of it.

How many pages have been written advocating some other occupation to be conducted with beekeeping, and poultry and fruit-culture have probably received the majority of endorsements. But we guarantee that a person who has been conducting the several occupations at once will bear witness that he has not attained the success in any of them that he would have attained with a close enthusiastic application to any one of them. Beekeeping has so long been wedded to farming which is a mixed industry, and by the way much more mixed than it should be, that it seems a task to break the bonds and stand it out as a distinct pursuit.

Not long since a young man who had been educated a beekeeper, and intended to make it a life business, was asked why he did not work in such and such pursuits with it. Oh! said he, I suppose I could, but I do not wish to take up any permanent line of work that will take my study and enthusiasm from bee culture. Now if success is possible, that young man will attain it, while the young man who gives two thoughts to bee culture, two to poultry, several to fruit and the rest to a fast horse and stylish road cart, will not attain success in any of them.

Another very important element which is generally lacking in the aforesaid theory and Aladdin class is *patience*. A short crop or no surplus at all, or a severe winter loss, or foul brood, or some of the other many ills that come

to try the beekeepers' patience, usually throws them out of the ranks in disgust.

But patience that will endure many defeats and even hardships, will secure success at last, and thus my true and tried brethren, while we stand upon the threshold of the new year, if we have reconsecrated our lives to things higher and nobler, let us look upon our calling as dealing with one of God's wonders, and try to imitate their constancy and patience, and in that way and no other shall we merit and gain success.

RAMBLER.

STORIFYING HIVES AND THE USES OF THE QUEEN EXCLUDER.

The prediction is made that the time is not distant when all beekeepers will be found using the queen excluder both in producing comb and extracted honey. Its use is already fully approved of by all of our ablest apiarists in working for extracted honey.

Though the wood-zinc combination makes the best queen excluder, yet while sheets of perforated zinc do well and have so many advantages over the practice without them the slight obstruction they afford to the work of the bees is more than offset by the advantages to the beekeeper. The wood-zinc queen excluder, however, is so perfect in its adaptation, when well made, as to present no obstruction whatever to the work of the bees. These facts regarding the queen excluder are now fully established and we may expect to see their use steadily extended until every beekeeper has a supply of them. Thus far many have used them experimentally, trying only a few of them and have found them highly useful, but others not knowing the requirements for the successful use of a queen excluder have condemned them in working for comb honey.

I desire to call especial attention to this fact, as at the present time there is an effort being made to dispense with queen excluders altogether on hives run for comb honey. Either the brood-chamber of the hive must be modified to suit the requirements of the queen excluder or the latter must be dispensed with. That is the dilemma in which many manufacturers now find themselves, and which horn of the dilemma to take not all are fully decided. One or two firms have decided to abandon the queen excluder rather than change the construction of the brood-chambers they have heretofore made. In so doing they are clearly not working in the interests of beekeepers, but rather going ahead defying the truth and relying upon the slow changes of the popular mind—that has been the history of all the needed reformation of the world.

Thus they expect to continue their trade and perhaps even enlarge it though the interests of beekeepers are sacrificed in the result. It may be said, in extenuation, that they are not fully acquainted with the facts about queen excluders, and hence, if their course is one to jeopardize the prosperity of our pursuit, they are doing it innocently, which is doubtless true. Yet it seems to me that the truth in regard to the use of queen excluders in producing comb honey is plain enough. Those who have read my new book certainly understand it, though much remains to be said, as we have some clinching facts yet to present.

The popular craze among hive makers appears to be to get up a cheap hive, which is well enough, but where cheapness is at the sacrifice of advantages essential to the profitable production of honey, then cheapness will only lure to disaster and lead to disgust for our chosen pursuit; and the fault—as is only too often the case—is not placed where it should be. If to get these very cheap hives we must dispense with queen excluders, then out with your cheap hives, for the right use of the queen excluder will give more profit to the beekeeper producing comb honey, than any other invention that has been given us within a generation.

To use the queen excluder success-

fully, the hive must be made to storify. That is, the brood chamber and section and extracting supers must be made to fit with proper bee spaces wherever put, because in working these hives it will often be required to place brood-chambers of brood above the sections, and the queen excluder will be placed whereever it will be of advantage to have it in limiting the queen and in preventing the building of nearly all burr-combs as we do on these hives. The brood chamber must be made light so as to be easily handled and as small as it can be made to work well. I prefer to have it made only $7\frac{3}{8}$ inches deep to carry a 7 inch brood frame and the capacity must not be less than for 800 square inches of brood comb. The one I use contains 830 square inches of comb, and it is as near the right size as we may expect to get.

Now the reason we want such a brood-chamber is because it is the utmost limit of profitable contraction of the brood-nest. This we have determined after a larger experience, probably than any other beekeeper in America, in the use of contracted brood-chambers, and we happen to live in a locality where without such contraction there is no success in beekeeping. This brood-chamber is also the best size for swarms, and when two stories are used there is no other hive its equal in successful wintering and for building up powerful colonies early in the spring for the white clover harvest.

But what are the objections to a large brood-chamber, say the common 8 or 10 frame L. hive? And what are the merits of the queen excluder? Well, in the first place the 8 or 10 frame L. hive is not large enough for spring breeding; that is, the capacity is not large enough to breed up a full colony such as the average queen is capable of producing in a protected hive before the harvest begins. Afterwards, it will hold too much brood or too much honey according to the disposition of the queen to lay or the workers to store in the brood chamber. Some colonies will rear during the harvest too much brood and so consume a good part of their stores in rearing brood that will hatch out too late to take part in the gathering of the harvest, and as they will be too old for winter, they are worse than useless as they must eat to live and so eat up a good part of the stores that should remain for winter. If the workers store too much honey in the brood-chambers, crowding out the queen, they will store little in the supers and thus take from the profit of the beekeeper. After the harvest the bees will rear a large colony out of the superabundance of their stores and consume so much as to leave barely enough for winter, by which means the principal part of the harvest of that colony is lost to the beekeeper. Now the above is where no swarming takes place. If the bees swarm they will be put in a new eight or ten frame hive the brood-chamber of which is so large that by the time it is well filled, the harvest is about over, and very little surplus is obtained except the season should be an unusually favorable one. The parent colony, if it does not swarm again (in which case it will be the worse for it) by the time it gets ready to work again in the supers the season is done, and the result is no surplus worth the while on either colony. The increase has cost a crop of honey and the beekeeper pronounces the season a failure. How common this is every beekeeper who has used such hives well knows. It is only an occasional year that the keeping of bees is profitable, and so the business falls into disrepute or neglect. Now where is the fault? Why, sir, it is largely in the hive and the inability of the average beekeeper to manage it with profit. The expert beekeeper finding his bees to do well at producing honey for extracting gradually ceases to produce comb honey and does not appear to know the cause of his failure; or if he does, the trouble is too great to remedy with division boards and dummies and a lot of other

clap-trap that should disgust any bee-keeper.

The above troubles with the standard hives in use are in no way remedied by the queen excluder, and so it has been condemned, and the writer, more than three years since, saw the folly of using a queen excluder on a large brood-chamber in producing comb honey and advised against its use on such hives. The very troubles that the queen excluder is capable of preventing on a properly adapted brood-chamber are not overcome on the large brood-chamber by any means, and so we are to have another year in which thousands of hives with large brood-chambers equipped for producing comb honey without queen excluders, are to be sent out over the country to further disparage the cause of profitable apiculture.

DR. G. L. TINKER.

[*To be continued.*]

New Philadelphia, Ohio.

IMPROVEMENT IN MANIPULATION.

I have been of the opinion for years past that not enough attention has been given to new and improved methods of manipulating bees in order to make the most out of them in the way of profit. Good bee-hives and good fixtures in general are sure to receive proper attention because the bent of mind has so long been heading in that direction, but the tide is now turning and we are going to have better manipulation than ever practised in the past. In an article like this I can only touch some points of so broad a subject as this.

When Mr. Doolittle describes his "ways" of managing bees he describes "set ways," and when Dr. Miller describes "A year among his bees," he describes "set ways," and nearly all other writers do much the same thing. If it is managing of swarms their plan is a "set plan," the thing is done in a "set way." Now I wish to call attention to the fact that it is impossible to practise any stereotyped plan in the management of swarms unless you are assured that every colony that casts a swarm is in precisely the same condition How often this is not the case, perhaps few have noticed. If you will examine the brood nest of every colony that casts a swarm you will find some of them full of brood, hatching with great rapidity, while others will be found full of brood with very few bees hatching out To obtain the best results each swarm and its parent colony must be treated, in view of the condition the parent colony was in when the swarm issued. If when a colony casts a swarm there are but few young bees hatching, the swarm will be deficient in young bees and therefore too short-lived to work the harvest with profit, and the parent colony will be too long getting ready for harvest work to be of much force. When this state of things intervenes I keep the swarm and parent colony together by removing all the combs containing brood to an upper story above the queen excluder, and hiving the swarm in the prepared brood-nest below the queen excluder. By this management the swarming desire is satisfied and my bees are all together. I am aware that to produce comb-honey in this way is contrary to the "set ways," but it is a part of my mission to explode the "set ways." I produce comb honey in this way largely and profitably. By putting the section cages on immediately, the work goes on in the section cases without any delay on account of the new brood-nest below the excluder.

When settling the point of size of hive to accommodate the bees, there can be no "fixed rule" in so great a country as this. In my locality the white clover harvest lasts from six to nine weeks, and swarming and reaping the harvest goes on at the same time and our bees must have room. I am free to admit, however, that the plan I have given above is peculiarly adapted to taking honey with the extractor.

G. W. DEMAREE.

Christiansburg, Ky.

IMPROVEMENT IN THE RACES OF BEES.

I would like to see discussed in your valuable journal, by the bee breeders of America the subject

HOW CAN THE SIZE OF THE WORKER BEE BE INCREASED?

I have purchased queens of many breeders who advertise *large* queens, hoping to get one that would produce *large worker bees*, as well as many of them. While I am satisfied as to the quantity of young ones, I cannot see any material increase in the size of the worker bees. There must be a method, correctly followed, that would produce a larger *race*.

Double the size of the bees, and you double the distance it could go for honey. Double the length of its proboscis and the red clover crop of honey would be at his command.

Horse breeders of France have given the world the "Normandy;" cattle breeders have the "Durham;" poultry, dogs, cats, etc., all have their large strains. Now let the bee breeders of America try their hand HOW TO BREED THE LARGEST worker bee: let beauty, three or five bands, go! that is only skin deep. Color! what is that? Only a vision of the eyes. *Italian*, *Carno what not!* Only a name! Give me the *largest worker* in a honey flow that drops *heavy* on to the alighting-board, and with active limb walks into the hive and instantly out again and, with widespread wing, is off to the fields once more.

That is the bee of the future, I am looking for. I believe the great obstacle in the way is that we use over and over for years, the *combs* in our *brood frames;* that we *cramp* the *space* for drones. A drone raised from an enlarged worker cell I don't believe is the *best* father for our bees; yet he is just as likely to reach the queen as any. Would we select a stunted bull and expect to increase the size of our cattle? No! Yet we go on using full sheets of foundation, and every other device to get whole brood combs without any drone cells. "Cut it out," all the writers say. I believe, if we are going to improve the race of bees we have got to turn back, and start new; right at the *brood frames* (empty) with new swarms of bees, in the spring, and *first* select the *largest* queen that can be procured; introduce her to the swarm, then run them into a hive, on to frames, with as *narrow* a *starter* as possible, and leave the bees to build such comb as in their judgment is proper. Now bring this colony to the condition of swarming naturally: select the *largest* daughter, send her to a breeder, say one hundred miles away, to be mated with drones raised from a like colony (you doing the same for him) and return her to be introduced to a swarm and run on to empty frames, etc., repeating as before.

If too many colonies of bees are produced, hatch out the young bees from old comb, unite them with the last queen and melt the combs. Never allow the bees to use combs for breeding more than *one* season old, and less if convenient. I would like to be one of an association, say of twenty-five bee-keepers to chip $10 a year for five years. $250 per year to employ a suitable person (like Henry Alley) to *truly* follow out a line like above and report the result each month in the API, and giving the information to the world. Take a colony and run it solely to improve the size of the bees, feeding all the time if necessary and changing the combs often. If the *association* after debate, decided upon any other plan to obtain the result, I waive my idea and go with the majority. Come, friend A, organize us into a bee improvement society, and we will find our bee of the future at home. CALVIN W. SMITH, *Wellesley Hill, Mass.*

Brother Smith has struck out in a new vein. We are personally acquainted with this gentleman. He can be found at his store, 117 Lincoln St., Boston, on most any day. He is the liveliest and one of the most enthusiastic bee men with whom we are acquainted.

One of our plans in order to get larger cells and larger bees would be to let the

bees build comb on foundation having cells not quite as large as drone cells. As soon as a large colony has been hatched brush all the bees from the combs and repeat as in the first case. In this way about four broods could be reared in one season.

Of course we would not forget the point friend S makes in selecting large queens and drones. We are not certain that a larger bee could be reared in this way; yet the experiment is worth testing. About all the expenditure needed is for a machine that will make the foundation with cells of the desired size. We are ready to undertake the work.—ED.]

TO KEEP MICE OUT OF HIVES.

Allow me to say to Kit Clover that a plan for keeping mice out of hives was given by me some time ago, that I like better than the drone trap, although I'll be magnanimous enough to allow her to use the way she likes best. I suspect the drone-and queen trap may be more useful than we have known, but wire cloth with three meshes to the inch, is the thing I have used, and it does not close the entrance so much, thus allowing better ventilation, and giving the bees a better chance to carry out their dead.

But it isn't of much use to close the entrance with eitner one after the bees are in the cellar, for the mice are apt to be carried into the cellar in the hive. Make your hives mouse proof while the bees are yet active out-doors, and then if a mouse is in the hive he will be stung to death.

Look here, Bro. Alley, what are you thinking of? Never knew mice to trouble honey when there is anything else for them to subsist upon? Well, I have. They're fond of sweet, and will take honey as part of their rations with almost any other diet.

C. C. MILLER.

No, we never knew mice to touch honey as long as there was anything else for them to eat. Our only experience with mice has been within a year. The little "cusses" got into our beehouse and raised (you know what Bob. Ingersoll calls it), yes, destroyed lots of nice combs. All the combs, and in fact, every thing else was afterwards removed but a small amount of honey in one or two combs. The mice then went for the honey and consumed all.

The only way I can explain it, Dr., is that our honey was so darned mean the bees rather starve than eat it.—ED.]

AN IMMENSE INSTITUTION.

Among the many fine improvements made here is the new bee-hive factory of the G. B. Lewis Co. We were piloted through it a few days since by G. B. Lewis, the senior member of the company and spent a few hours very pleasantly in looking over the various departments, and receiving a description of the *modus operandi*. The new factory proper is a frame building, three stories and basement high, 60 feet wide and 130 feet in length, and contains 26,000 square feet of floor room. Over 250.000 feet of lumber was used in its construction. Adjoining the factory has been built a fine brick engine room, 25 x 62 feet, and a little to the west of this is another new brick building for office purposes. It contains a large fire-and-burglar-proof vault, and a suit of rooms nicely arranged and supplied with every convenience for office work. The power for operating the machinery in the factory is furnished by both steam and water. Of the latter it has 100 horse power, and of the former 125 horse power.

Bee-hives, sections, shipping crates, common boxes, fancy dovetailed boxes, etc., are turned out in countless numbers, necessitating the employment of 100 hands, and consuming in their manufacture yearly between three and four million feet of lumber. The goods manufactured by this company are in great demand, being sought for far and near, the trade extending not only all over America but to European countries as well. This institution is the largest of its kind in America, and we believe in world. To Watertown and her people it is of vast importance, giving employment to more persons than any other manufacturing establishment in the city. Besides the buildings above specified, a

large warehouse, 48 x 80 feet, is used as a storeroom for the company's goods. The members of the company, Messrs. G. B. Lewis and Chas. E. Parks, are energetic go ahead business men, up with the time and alive to the wants of their trade. By their enterprise and sagacity they have done much towards the prosperity of our city, and have earned for themselves a well-merited competency.

Watertown, Wis., Gazette.

CHIPS AND SHAVINGS.

INTERESTING NOTES OF PRACTICAL VALUE. CONDUCTED BY E. L. PRATT.

Kit Clover's last article in the API was as full of points as an egg is of meat.

I guess the new Alley Swarm Hivers will settle the wing clipping business after all.

Mr. E. Francis' article, with diagram, on "out yards," in "Gleanings," was very interesting reading to us.

Dr. Miller's method of "pulling queens" is quite original but not at all advisable.

Mr. George Morris suggested painting the quilts and mats with melted propolis to prevent the bees from gnawing them.

Mr. Jas. Heddon has an electric turn of mind at present. It may be that is why we do not see more from his pen of late.

F. A. Salisbury, a commission man at Syracuse, N. Y., has found that the honey producer is apt to cheat a little now and again.

Enamelled cloth for covering over the frames is getting the "grand bounce" all around. Like the honey-board, it has had its day.

High color, Bro. Vandruff, sells entirely by its flash. We are all inclined to bow down to gold, no mattter what form it assumes.

Why try to prevent swarming when such good results can be had by allowing bees to swarm? Increase can be profitably prevented, but swarming never can.

The G. B. Lewis Co. is manufacturing a dovetailed hive made of $\frac{3}{8}$ inch stock; they doubtless are aware of the fact that hives made of $\frac{7}{8}$ inch lumber have had their day and are about ready to be doomed.

The "Rambler" has the correct idea about the "American bee of the future." We shall turn to and endeavor to develop that bee. I believe the yellow Carniolans are a long stride toward a more perfect bee.

The "We" business may be antiquated but Mr. Miller will have to coin a word to use in its stead. Big "I" will never do for an editor who is anyways modest. How would it do to use one's name entirely? thus: C. C. Miller will do so and so.

The Roots have had trouble in shipping queens in cold weather on account of the candy becoming hard. Try best grade New Orleans syrup, kneaded in just like honey and you will have good success. A little comb honey added will not do any harm.

In a few years the clumsy things will be classed along with things of the past. It was only a few years ago that bee hives were made of two-inch plank. The hive of the future will not be much thicker than $\frac{3}{8}$ of an inch, and their outside cases will be used in cold, changeable climates.

Why does Dr. Tinker persist in saying that a queen-excluder is necessary under the boxes? We find no use for them excepting between brood-chambers or under the brood-chamber next to bottom-board, to prevent the queen from getting out in our double entrance swarm controller.

Somebody wants to know what to do to the bees this month. I generally refer them to the text books, but there is something not written there which needs attention about now, and that is: Prepare your orders for supplies as far as you can. Do not delay ordering if you know just what you will need.

If for any purpose one needs young bees to strengthen up nuclei or make colonies, the plan given by Mr. A. C. Tyrrel in Jan. API is good. We have experimented a great deal in this line and have settled upon what we call the most practical plan for securing young bees to build up weak nuclei. We have a sort of wire-net bee tent to fit the top of our hive; at the apex is adjusted a wire trap with a cone, such as used on the Alley Swarmer. About the time of day young bees are out for a play spell, we throw the cover of a strong colony and attach the above arrangement to the top of the hive and leave it for an hour or so. In this manner we can draw from a good strong stock quite a large number of young bees that will stay where they are put, and we find that the loss is not apparent. By shifting the tent from hive to hive we can catch up enough bees to make a good swarm. Give them a young queen and hive them like a natural swarm, and they will do first rate if there is a good honey flow.

The fact that the self-hiver can be utilized for a drone-and-queen trap, and makes a trap rather better than the old style, will make it popular with all beekeepers.

SYRUP FOR FEEDING BEES.

Syrup for bees can be made of any cheaper grades of sugar, but when feeding for winter stores, by all means use the best grade of granulated sugar. Take, say twelve pounds of sugar and four pounds of water, and bring it to a boil; this will make a syrup of the proper consistency.

I have repeatedly tried tartaric acid to prevent the granulation, but have not been able to notice any benefit, and do not recommend it; however, if about two pounds of extracted honey are stirred in as you lift the syrup from the fire, it will do more to retard granulation in the combs than anything I know of; it will also impart the honey flavor to the syrup, thus making it sought after by the bees. I notice that some of our friends entertain the idea that by adding more water to the syrup it will go farther.

This is an erroneous idea; the bees will evaporate the water and reduce it to a thickness consistent with keeping qualities. If the bees were deprived of this faculty, watery sweets would become sour and rancid in their cells.—*Indiana Farmer.*

Two or three pounds of good honey added to the above amount of syrup will prevent granulation. Then again, four pounds of water is not enough to dissolve twelve pounds of sugar. Add two pounds more water.—ED]

CANDY FOR BEES IN WINTER.

It often occurs that winter overtakes us with colonies that lack food. In such cases we cannot possibly use syrup for food, as the weather is too cold for the bees to seal it over, and unsealed stores will not serve properly for winter. The moisture which always arises from the bees in cold weather, enters the unsealed honey and dilutes it, making it very unwholesome. Our only resort, therefore, for feeding in cold weather, is to make candy and use it. This is a very good and healthful food, if properly made and administered.

It is made from granulated sugar by melting it, adding a little water—no

more than will thoroughly melt the sugar — when it is boiled a few minutes and poured out into cakes or slates of three or four pounds each. When cool this becomes very hard, almost like rock candy.

In feeding this, it is placed on frames just over the cluster of bees, where they can have access to it at all times. When in this position it receives the heat arising from the bees and they remain on it all the time. It is so hard, that it will last them a long while. This candy may be given to the bees at intervals during the winter, and colonies may be brought through in good condition which would have otherwise perished.

This or any other work that is necessary to do with bees in winter should be done on warm days. It will not do to molest them on a cold day, but it should always be done on days when the bees are flying.—*American Agriculturist.*

Where is that fellow who laughed because we said bees would winter upon dry sugar? If the preparation above is not *dry* sugar, what is it? However, we do not believe bees will winter on such food; it is too dry and hard.—Ed.]

MURDERING THE BEES.

Only a few days ago one of my neighbors spoke to me about some colonies he had bought at a sale. He paid $20 for ten colonies. He intended to kill the bees and sell the honey, to make a profit on the money paid out for them. I persuaded him to "let them live." I told him if they had enough honey to bring $20 or more, they had enough to winter on, and that $4 each next spring would be very low for them.

Whoever heard of such a thing as a man killing a hen to get the eggs, or a cow to get her milk. Killing bees to get honey is just as foolish. If your bees have failed to store enough to winter on, and you cannot afford to buy sugar to feed them, then, through sympathy, kill them, rather than see them starve to death. But if the bright, intelligent, "busy bees" have worked and toiled all through the hot summer, through thick and thin, saving enough to live on through the long dreary winter, for pity's sake let them live and enjoy the results. Encourage industry, for it is "by industry we thrive."

Study the habits of your bees; you cannot help but love them; especially the gentle, intelligent, yellow Italians.—*Prairie Farmer.*

Does the person who wrote the above know of an easier way for bees to die than by starvation? Bees in a starving state simply go to sleep and nature has so planned it that they do not suffer in the least.—Ed.]

[From A. B. J.]

THE CLOSED-END FRAMES.

W. P. FAYLOR.

Much is now being said about "closed-end frames." I have experimented some with frames so made that the end-bars were each an inch and-a-half wide and half-an-inch thick, with top and bottom bars just alike, so as to admit of either side of the brood-chamber being turned up, the end-bars extending so as to allow a bee-space above and below the top and bottom bars. These frames rest directly upon the bottom-board; and two boards, as long and as wide as the frames, form the side-enclosure of six, eight, or any number of frames.

I find no trouble about separating the frames, or in the crushing of bees; but the main difficulty lies in getting something suitable for drawing the frames tightly together.

Driving a nail in the end of each board, midway, and stretching a wire doubly across, from board to board, after the Bingham fashion, will work, but not to my satisfaction. It seems to me that some kind of a coil spring might be invented to hold such frames in position

Could we get something to hold any number of such frames together, then we could have just what we want. We could then take an eight-frame hive and use four frames above and four below, forming a double decker, and a large

number of such hives can be packed in little space.

I do not think it practical to use closed-end frames inside of box-enclosures, the way we use the hanging frame. We want the closed-end frames so that we can separate any two frames by running a knife between the end-bars. This cannot be done so readily where the frames are inside of a box held by thumb screws or wedges.

The advantages of such a hive need no comment. I should like to hear from others who have experimented in this line. Let us go a little slow before we make kindling wood of our "Simplicity" frames.

State Line, Ind.

P. H. Elwood says "closed end frames have come to stay." So they have—a box to insert closed end frames for the purpose of holding them in place is a nuisance. The frames in the closed-end Bay State hive are held in place by boards at side of frames and two iron rods with thumb-nuts at each end bind them firmly.—ED.]

MEMORY IN BEES.

I was living in a town where I knew some few bees were kept, and I chanced to have some comb from which the honey had drained; and so, instead of being greedy, and squeezing out all I could get, I determined to give a feed all around to such bees as chose to accept my invitation to dinner. This invitation I gave by opening the window, and putting the honey on the sill. In about half an hour some foragers found it out; they helped themselves, and carried back the good news to the sisters in the hive. In the course of the morning my room was literally swarming with bees, and I need not tell you, as they are grateful creatures, that they did not meddle with me, but, as I sat at my books, repaid me for my treasure with their sweet music.

In the afternoon, they were satisfied, at least for the day, and dropped off, one by one, without doing any injury.

There is nothing strange in all this; but now comes the interesting part of the story: I myself got up the next morning, sometime before the bees are usually stirring, and, as I went to my window (it was in September) to see the first rays of the sun in the eastern sky, I was much surprised, and not a little delighted, to see a number of bees who had remembered and been grateful for the dinner the day before, waiting for me to let them in to a similar breakfast.

As some of the honey was left, you cannot doubt but that I complied with their wish, which was clear enough to me, though they had no tongue to express it. I opened the window; the room was soon filled; they cleared the combs of honey, and then went orderly away.

They haunted my windows for several mornings after, though I had no more honey to give them. This is, I think, a pretty strong instance of memory in bees.—*Spare Moments.*

The above illustrates how easy it is to set a whole apiary to robbing. We have often had reason to regret the fact that bees have a good memory. Carelessness and forgetfulness in leaving small pieces of honey near the apiary, have caused us no little trouble. One ounce of honey left where the bees will have access to it after the harvest is over, will sometimes set the bees crazy.—ED.]

NORTH AMERICAN ASSOCIATION.

I cannot refrain from saying that this meeting was one of the best, if not *the* best, in enthusiasm, good-natured banter, in attendance, in the *practical* character of the discussions, in the character of the *men* and *women* who went; and last, but not least, in the *business* done, and recommendations made—in the history of the Association; and I hope this is only a side-show of the good times coming, when the Association shall be incorporated under the laws of Illinois, and when the membership, instead of its present floating character, shall be permanent, with a long list of life-members and annual members, who will keep up their dues, whether present or not.—R. J. ROOT, *in Gleanings.*

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EDITORIAL NOTES.

WE have an old-fashioned New England winter. Plenty of snow, ice and zero weather.

The editorials must be brief this time, as we need the space for other interesting matter. Just look our columns over and see if you can not find sufficient information that is worth to you more than one year's subscription. Show the API to your friends and ask them to subscribe. Point out the inducements we offer. Help us publish a good paper.

After about thirty days of confinement the bees had a flight. As our colonies were fed all their stores (sugar and honey) neither the snow nor hives were spotted in the least. So much for a good quality of food — we found all our colonies in splendid condition.

WOMEN IN THE YEAR 2000.

As a sort of supplementary chapter to his "Looking Backward," Mr. Edward Bellamy has written an article for the February issue of *The Ladies' Home Journal*, under the title of "Women in the year 2000," in which the famous Nationalist will sketch woman, marriage, courtship, etc., as they will be regarded in the year 2000.

Several new bee-papers have made their appearance within a few months. We hope they will succeed, yet we do not see how they can. Beekeepers who take an interest in bee literature or who subscribe for bee-papers are sadly in the minority. Why do not more of the 300,000 beekeepers of this country subscribe for and read the bee journals? Come forward, friends, and lend a helping hand in these matters; it is for your interest to do so.

The fact grows more and more apparent every year that this country, especially the eastern states must depend upon the honey resources of California for its supplies of honey. Some fifteen years ago A. E. Manum and several other large beekeepers in Vermont used to send honey to market by the car-load.

In the state of New York were Mr. Doolittle, Capt. Hethington, C. L. Root and a hundred other honey producers who used to fill the New York and other markets with fine comb honey. Now how is it? We do not nowadays hear of these large crops of honey, yet we do hear about car-loads coming from California. Even one of the large beekeepers of Ohio, A. I. Root, has purchased and sold several carloads of honey shipped to him from California.

Well, it really looks as though honey producing must go into the hands of the smaller beekeepers.

A WORD ABOUT OLD AND NEW BEE-PAPERS.

The old *American Bee Journal* comes to hand in its new form. In this respect its improvement over the old style is quite marked. In other respects there is no improvement. We mean it, Bro. Newman. It was not possible to improve on the general make-up of the A. B. J. How can anything already perfect be improved on?

GLEANINGS.

Gleanings made an improved change several months ago. If there is anything wrong about *Gleanings* we do not know what it is. Brother Root probably has the largest subscription list of any of of the bee-papers; yet we doubt whether he gets as much profit from *Gleanings* (except as it is his advertising medium) as is realized from some of the other papers. Brother Root gives his subscribers a good deal for their money.

THE REVIEW.

This paper has also made a change. Several pages, as well as a cover, have

been added. No doubt the subscribers of *The Review* appreciate the editor's efforts to please them.

THE CANADIAN BEE JOURNAL.

No particular change has taken place in the *Canadian Bee Journal*. This paper is always well filled with practical, readable articles. It reaches us regularly twice each month.

THE AMERICAN BEEKEEPER.

This new paper has been received and is a credit to the printer. While the publishers did pretty well for the first issue, considering their inexperience as publishers, we think they will do much better in the future. The *American Beekeeper* contains several well written articles from experienced apiarists. We hope Falconer & Co. will succeed as well in publishing a bee-paper as they have in furnishing beekeepers' supplies.

THE BEE WORLD.

This is another new bee-paper and one that came to hand very early in January. It is well printed. The editor is W. S. Vandruff, Waynesburg, Pa. In order to get his paper out promptly Jan. 1, Brother V. was obliged to make some selections from other papers. The selections and extracts are first-class, as several articles were selected from the columns of the API. Success to the *Bee World*.

STILL THEY COME.

Wm. Styan & Son, San Mateo, California, will issue the first copy of the *California Beekeeper* in February. There are over 9000 beekeepers in the state of California, and there is no reason why a first-class bee-paper should not be well supported and made a success in that state. If one-third of the above number of beekeepers will send Brother Styan their subscriptions, there is no doubt about the success of his publication.

Do not be backward, California friends; take hold and help Brother Styan in this most desirable enterprise. There is more available material for a good bee-paper in the state of California than in any other state in the Union.

We do not wish it understood that every one must purchase an individual right in order to get one of our self-hivers. We mail a sample to all who desire them, for $1.00. If, after that you need an individual right to make and use them, the one dollar may be deducted from the five dollars, the price of the right to manufacture.

NOTES AND COMMENTS.

Under this head will be included a picultura news and comments thereon.

THE WINTER IN NEW ENGLAND.

In the northern states bees winter better, consume less food and come out stronger when the weather is steady cold like the present winter, than they do when it is so warm they can take a flight several times each week, as was the case here in southern New England the past two years.

The oftener bees take a flight, the more food required, and the more bees lost on the cold ground.

THE SELF-HIVER.

Dr. G. L. Tinker was the first beekeeper to purchase an individual right to make and use the Self-hiver. In his note accompanying the cash Dr. L. says: "I see you have the Swarmer advertised in all the bee papers, which means that you have a highly practical article."

Dr. Tinker is right in the above opinion. We had an idea that the swarmer would not do all we claim for it, none would be offered for sale.

Brother J. E. Pond, after examining the swarmer wrote thus:

North Attleboro, Mass., Jan. 8, 1891.

FRIEND ALLEY: When Pratt was here he showed me the swarmer. You can say from me, in any words you choose, and unqualifiedly, that the swarmer is a big thing; that it is one of the great "bee inventions" of the age, and that it will simplify matters as much as did the movable frame.—J. E. POND.

The Swarmer will be sold on the following terms: One sample by mail, one dollar. After that, as per price list

found on another page. Those who purchase fifty swarmers will be given an individual right to make and use in their own apiaries all the swarmers they please, while those purchased may be sold to any one. Those who purchase patented articles of the patentee, have the same right to sell them, as goods non patented. So you see you can sell the swarmers to your neighbors, thus realizing a good profit, and then have the right to make all you need for your own apiaries.

We want agents in every country in the United States to push the sale of the Swarmer. We offer the most liberal inducements. Every beekeeper in the country will purchase when it has been shown and explained. The fact that the swarmer makes a much better drone and-queen trap than the one we have sold the past eight years, should induce all who keep bees to test them.

Send $1.50 and get the AMERICAN APICULTURIST one year and a swarmer by mail.

SOMETHING ABOUT QUEEN-CELLS.

Queen-cells which are large and corrugated are said to produce much better queens than do those which are small and smooth. Those queen-cells which have their cover cut off smoothly and evenly by the queen when emerging, and in which the royal jelly is not all consumed give superior queens. A scarcity of royal food means small or imperfect queens.—G. M. DOOLITTLE.

The above is going the rounds of many country agricultural papers. Why it is credited to Mr. Doolittle is a puzzle. The same thing may be found in the "Beekeepers' Handy Book" published in 1883. If we are not mistaken it can be found in Mr. Langstroth's work published more than thirty years ago.

POLLEN-GATHERING DRONES.

R. I. Davis says in A. B. J. that he saw drones carrying pollen. The above statement will do to go with the "queen-stinging-bee" story as related by Dr. C. C. Miller. Don't "jaw" Dr., because no one will believe that story.

There is not a beekeeper of any experience who does not know that drones never gather pollen or honey.

There is too much nonsensical talk in some of the bee papers. A fellow imagines he sees something wonderful, or something new, and at once strikes for pen and paper; off goes an article to some editor and then after the reader has waded through a three-column article finds that he is no wiser than before he spent his time in perusing such twaddle. Why not spend your time, ye fellows who can "sling ink," in giving the readers of bee publications some practical facts? Most of those who are keeping bees want the profits from their apiaries. Leave the cheap story papers to publish the nonsense.

APICULTURIST MAIL BOX.

FULL OF GOOD ADVICE.

Whately, Mass.

HENRY ALLEY, ESQ.: Enclosed find $1.25. Send API another year. It is full of good advice. I could not get along without it. C. A. GRAVES.

THE BAY STATE HIVE.

Aurora, Mo.

FRIEND ALLEY: I saw in *Gleanings* of December 15, a description of the BAY STATE BEE-HIVE It is the hive I want.

GEO. INMAN.

Stromsburg, Nebraska.

MR. HENRY ALLEY: I have been studing the good points of your BAY STATE HIVE and have made up my mind to try some of them. G H. MORROW.

FINDING A QUEEN.

Poughkeepsie, N. Y

MR. ALLEY: The queen you sent me last year was successfully introduced. I tried the plan recommended in API, for finding a queen, by using a drone-trap placed at the entrance of the hive. I am glad to know such an easy and sure way of accomplishing this task, that I had before found so difficult. S. E. WILEY.

TO SUPPLY DEALERS.

Supply dealers have found that it pays to advertise in the APICULTURIST as our well-filled columns amply testify. We have found that advertisements are read and generally answered by those who send for sample copies. We get calls by each mail for from twelve to fifty copies of the API We mail them at once. Besides, our friends are continually sending us names of live beekeepers; to such, a specimen copy is at once mailed. This is why it pays to advertise. Hundreds of new beekeepers read the API each week.

BEE HIVES.

A SUBJECT THAT INTERESTS ALL BEE-KEEPERS.

In my beekeeping experience I have found that I could generally get the attention of almost any beekeeper when I had a new hive to exhibit, or was ready to discuss the hive question. In fact, there is nothing connected with bee culture that will attract the attention of the average beekeeper, or one that interests him more than a good bee-hive. Almost all beekeepers are looking for something better in hives than they have in use. In my day I have devised not far from twenty different styles of bee hives; and all but one were discarded after testing them a few seasons. There are several points I never lost sight of when trying to construct a practical bee-hive. Some of the points are these:

1. A proper brood-frame. 2. A hive suitable to winter bees successfully on the summer stand. 3. A hive so constructed that it can be set in the sun without protection all summer, and without danger of destruction of the combs or of roasting out the bees. 4. A hive so arranged that the largest amounts of both comb and extracted honey can be secured.

In some of the hives I have devised I could not combine all the desirable features here named. In my last attempt to construct a practical hive, and one suited to most classes of beekeepers, I think I have combined all the best features. This hive is called the

BAY STATE CLOSED-END-FRAME HIVE.

I do not claim, by any means, that the Bay State is the ideal hive; but I do claim that it is good enough for any beekeeper, and that it has but few, if any, objectionable features.

I will describe some of the good points of the Bay State, and explain the illustrations in as few words as possible.

Fig. 1 illustrates the hive as prepared for winter. By examining fig 5 (bottom board) it will be seen that G G and F F, are strips of wood upon which the brood-nest rests. The strips are $\frac{3}{8}$ of an inch thick. The outer or winter case shuts down outside these strips, thereby completely excluding all water, and preventing the packing, when any is used, from becoming wet. As the entrance is below the level of the bottom board, and directly under the strips the frames rest on, no water can enter the hive there.

Fig. 2 shows the brood-chamber, which is merely eight closed-end frames, two side boards, and two iron rods with thumb nuts at each end. The frames rest on a bottom-board which is described in fig. 5.

The Bay State hive is used in summer exactly as is shown in figs. 3 and 4. Ninety-six sections can be used to good advantage on the hive at one time or four sets of sections: twenty-four one-pound sections to a case. I have had colonies fill all in one good season — something which is considered a big thing here, when it is known that our honey season is of but a few weeks' duration, including both favorable and unfavorable weather.

Now a word about the way we manage the Bay State hive to get comb honey, and to use so many sections at same time. Of course, no sane beekeeper would think of placing ninety-six empty sections on a hive at one time. One case of twenty-four sections is enough to start with even with the strongest colony. When this case of sections is pretty well filled, it is raised, reversed, and a new set of sections put on the hive, and the first set placed upon that and so on until there are three or four sets of sections, or as many as the bees can work in at one time when tiered up. The passageways through the four cases are direct from the brood-chamber to the top sections. By the above plan the empty sections are at all times nearest the brood. I believe that the sections can be put nearer the brood in the Bay State hive than in any other one now in use. This is a feature I have tried to incorporate into all the hives I have devised.

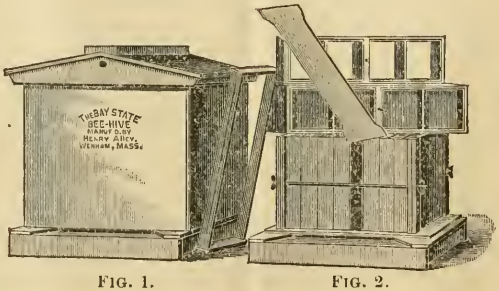

FIG. 1. FIG. 2.

Another good feature about this hive is, that it is not necessary to use any queen-excluder between the section-cases and brood chamber; and, furthermore, of the thousands of Bay State hives in use, no queen has ever been known to enter the sections and deposit eggs therein. Can this be said of any other hive in use? By

saw-kerf in the top-bar, for inserting foundation comb-guide, or for fastening full sheets of foundation when desirable to do so. The foundation is placed in the kerf, and then three one inch wire nails are driven through the edge of the bar to hold the combs in place. The work is quickly done; and, when properly done,

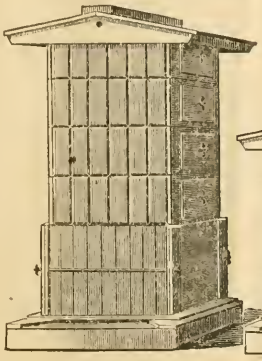

FIG. 3.

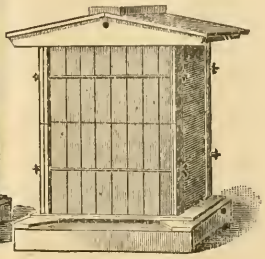

FIG. 4.

reversing the sections when partly filled with honey, the bees attach the comb to all sides of the wood. This is a feature appreciated by all who find it necessary to ship honey a long distance to market.

Bear in mind, that twenty-four sections are reversed at one time, and none can get out of place during the operation

Here is another point about this section-case worthy of mention: The sections are all incased in wide frames, and it is impossible for the bees to soil them with propolis or by travelling over them At the same time, every section is held in a perfectly square position.

Fig. 4 represents the Bay State hive as used for extracting honey. There are two sets of brood-frames—one over the other, with a queen-excluder between the two hives. On the top is used an ordinary honey-board, and then all is protected from sun and rain by a hive-cap, the same as seen in fig. 1. A small stone, or weight of any sort, will prevent the wind from blowing the cap off. What little rain will reach the frames or section-cases when no outside or winter case is used, can do no harm.

The sides of the winter case are but $\frac{3}{8}$ of an inch thick ($\frac{7}{8}$ board split), thus adding materially to the lightness of the hive. When complete in all its parts this hive weighs but thirty-five pounds.

Fig 2 gives a good idea of the brood-chamber, section-case, etc. One frame is removed from the brood-nest to show the the foundation will hang perfectly true within the frame.

It will also be seen in illustration, fig. 2, that one wide frame is removed from the section-case, thus showing the sections and the separators, which, it will be seen, run the full length of the case.

The Bay State hive has but eight brood-frames, and a brood-rearing capacity of about two-thirds of a ten-frame L hive. We have used this hive six seasons, and

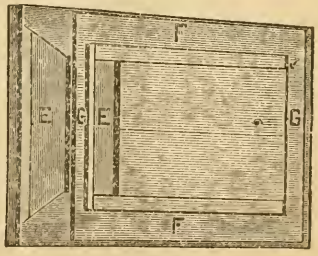

FIG. 5.

find it large enough for all practical purposes, and first-class in every respect. The brood-chamber is so compact and so well protected from the weather by the outer case, that colonies breed up rapidly and quickly in the spring. No hive can winter better on a summer stand. We now make the winter case of these hives sufficiently deep to cover two brood-chambers, or one set of frames and two sets of sections, forty-eight sections in all.

The B. S. hive is so constructed that the closed-end frame or the L. frame can be used without any changes to the bottom-board. Of course, the L. frames must be used in a box or case so that the frames can hang on rabbets.

HENRY ALLEY.

Wenham, Mass.

PRICES OF QUEENS TO SUBSCRIBERS OF THE APICULTURIST.

We beg to remind all subscribers to the API that they can get one of our best *select Italian queens* by remitting seventy-five cents at the time the queen is wanted. The regular price of such queens is $1.25.

If any subscriber prefers one of our *select golden Carniolan queens*, the same as we charge $2 for, one will be sent for $1 25, or, the two queens and the API will be sent for $2 50. The queens may be ordered and paid for when wanted. No queens will be mailed before May 20, 1891.

The development of the bee industry is shown by the increased attention given to the apiary by several of the leading agricultural papers. The most largely circulated agricultural semi-monthly in the country, the FARM AND HOME, of Springfield, Mass., has engaged Samuel Cushman as its apiary editor. Mr. Cushman is well known as the painstaking apiarist of the Rhode Island agricultural experiment station. Judging from the specimen copy received, the apiary department promises to be an important feature of the Farm and Home.

THE DRONE AND-QUEEN TRAPS. AT REDUCED PRICES.

We have received from the factory a large number of drone-and-queen traps. If any one is disposed to purchase them at this time we shall sell half dozen in flat, one made, seven traps in all, and give the purchaser an individual right to manufacture the traps for his own use for the small sum of $3.00. If you wish one dozen traps (13) and individual right, we will ship them for $4.00. Those who purchase fifty traps, price $10, will get an individual right to make the traps, also the API one year free.

Now let me tell you something all of you, or many of you, do not know about; at least nine out of every ten persons do not. Do you know that you can sell any or all the traps you purchase of us in any place in the United States where the territory is not sold? You can come into our town and sell these traps if they were purchased of us in the first place.

Now if we sell you one dozen traps (13) you can sell every one of them for 50 cents each. This will be $6.50. You then have the right to make all you can use in your own apiary.

Those who have an individual right to make the traps, can obtain the material for them from their nearest dealer. A person who owns a right to use and manufacture a patented article has the right to get his goods manufactured just where he selects. So you see it will pay you to purchase an individual right in any case, as by so doing you can more than save the price of it in express charges on one dozen traps.

We want agents to sell the traps in every county in the United States; also agents to introduce the Self-Hiver into every apiary in America. Pay liberal.

If any subscriber desires to examine one of our improved Drone-and-queen Controllers, we will mail it for thirty-five cents, or, the API and Controller for $ 1.10.

The API and one of our improved Self-hivers will be mailed for $1.50.

OUR ONE-HUNDRED DOLLAR QUEEN.

Bear in mind that each subscriber to the APICULTURIST is entitled to one of the best queens reared from our one-hundred dollar queen, by remitting seventy-five cents when the queen is wanted.

THE AMERICAN
APICULTURIST.

A Journal Devoted to Practical Beekeeping.

VOL. IX. MARCH, 1891. NO. 3.

SHALL WE USE SEPARATORS?

A NUMBER of years ago when I commenced raising comb-honey, I thought it impossible to get along without separators. I used 2-inch sections and whenever separators were left out of the cases the combs were more or less bulged, just as one would expect to see sections of that width bulged in these later days of beekeeping. After a while, I adopted $1\frac{7}{8}$ inch sections and still continued the use of separators. It is possible that I may in time come to the use of the 7-to-the-foot sections without separators, but I do not now think I shall. I have not experimented with the narrow section, but I have seen plenty of them on the market and I am free to say that I have seen few lots of first-class honey that had been produced without separators.

In this western country the grocers usually retail comb honey by the section, and as a matter of course those lots in which the sections are nearly of uniform weight are the most desirable. I have yet to see the first case of honey produced without separators that would answer this requirement. Even the great apostles of that method of production are careful to say that great care must be exercised in casing for shipment in order to avoid the surface contact of thick combs. "Place a thick comb by the side of a thin one, etc.," is their advice, and good advice it is for those who produce honey without separators, for it is the only way it can be cased to ship without dripping. But such a case of honey is not an ideal case by any means, and the retailing grocer has a hard time to satisfy every customer with a "nice, thick comb."

Two objections are urged against the use of separators: (1) their cost, and (2) that they divide the super into so many compartments that the bees are slow to occupy it.

It is true that the first cost of tin separators seems considerable, but as an offset to first cost it is well to bear in mind that with proper care they will last a good many years. I have a good many that have been in use eight years and they are as good as new. The cost of wooden separators is hardly worth mentioning, but in the long run I think they are more expensive than tin. As to the intrinsic value of wooden separators as compared with tin, I have never been able to detect any difference. The bees work just as well with one as with the other.

In answer to the second objection I can only say that after long and patient experimenting with supers with separators, without separators, and with frames like brood frames, though of half depth, I cannot see any difference. The bees go to work just as quickly in one super as the others when conditions otherwise are the same. I may, after greater experience, change my mind on this point, but at present I have no reason to do so. With separators I obtain sections with even surface and of uniform weight (nearly), and I value these qualities above any advantages that I might possibly obtain by leaving the separators out.

Audubon, Ia. Z. T. HAWK.

ABOUT QUEEN CAGES.

As the science of bee culture advances, the importance of improved races is felt. This desire creates a demand for queen bees of the improved breeds, and the trade in these, in turn, calls for cages for shipping and introducing queens in large quantities.

No doubt the first cages used were

crude affairs. Of these I have no recollection. The first practical cage I remember is the "Peet." It was a good cage, but had some serious defects, among which might be mentioned the side of tin which was cold and smooth, so the bees could not cling to it; the cage was apt to become loosened from its fastening when the tin slide was removed and it was difficult to put the queen and bees in the cage. It was too expensive, etc. When queens were sold at $5.00 each the difference of three or four cents in the cost of the cage to ship in was a small matter; but, as competition and improved and systematic methods of rearing bees reduced the price of queens, it became necessary for dealers to reduce expenses as much as possible, and one way to do this was in the cost of the cages, in shipping and introducing.

About this time many breeders used for shipping a plain block of wood, with one large hole for the bees and one smaller one for candy. This cage did fairly well for shipping, but was not at all suitable for introducing. In 1884 or previously, Mr. Frank Boomhoover used a cage altogether different from those then in general use. A modification of this cage is illustrated on p. 733, *Gleanings*, for 1885. The greatest objection to this cage was the cost to manufacture.

To Mr. Frank Benton is due the credit of giving the idea which led to the construction of the best shipping- and introducing-cage now on the market. Benton's cage was figured in 1884, was designed for shipping queens across the ocean and as such it was a perfect cage, but it was not at all suitable for introducing, and the cost to manufacture was too high; but to Mr. E. L. Pratt is due the credit of modifying this cage, so as to make it practical for general use, which he did about five years after the publication of Benton's cage.

Perhaps some assistance came from myself, but I am sure I should not have thought of it if the idea had not been presented and myself requested to do so by Mr Pratt. As many have wondered why the cage was called the "Pratt perfection" I have given the above. The modification of Benton's cage was as follows: first, the cage was reduced very much in weight, thus reducing the carrying postage. Next, half the boxing was dispensed with, thus reducing the cost. The hole made by the worm of the bit was done away with, thus making smooth surface at the bottom of the holes. Another important point gained here is that the candy cannot leak out and daub the mails.

The cage is now made as follows: sizes $\frac{3}{4} \times 1 \times 4\frac{1}{4}$ inches; three 1-inch holes bored from one side nearly through. A $\frac{3}{8}$ hole bored from one end connecting all the inch holes; this hole is to put the bees in by, also for a passage way from one chamber to the other and to give them access to the candy. This $\frac{3}{8}$ hole is covered by a small tin slide on the end of cage. A small saw kerf is made in the corner of this end opening into the chamber—for ventilating purposes. So far as I know, this idea was original with me; if it was not I shall not loose any sleep on account of it. The inch-hole at the opposite end from the tin slide is filled with good candy; a piece of wire cloth is tacked over the top, covering all the holes about $\frac{3}{8}$ inch of the candy; this is left for introducing purposes and, by the way, this idea, I think, belongs to our friend Mr. Alley. A thin piece of wood, having a $\frac{3}{8}$ hole opening into the hole nearest the tin slide, is fastened with wire nails over the wire cloth covering the cage. Thus prepared, it is ready for the mails, without any wrapping, tying or other preparation.

A cage on this plan is also made only one-half inch thick. This latter requires but one-half the postage of the thicker cage and is also more cheaply made.

While I feel a good deal as Dr. Miller does, viz, that any implement is not so good but something may be invented which is better, still the cage here described is so nearly perfect that I do not know a single chance for improvements so that the name "Pratt's perfection" is quite appropriate.

Waterboro, Me. C. W. COSTELLOW.

SHALL WE TRY TO HAVE LARGER BEES?

I have no disposition to discourage any effort that looks toward the improvement of bees, but I should like to see it made in directions that promise success. At any rate it will do no harm, friend Alley, to call the attention of yourself and Bro. Smith to an item or two lying in the way of your intended improvements as outlined on page 21.

Bro. Smith says, "Double the size of the bees, and you double the distance it could go for honey." What assurance have you of that? Does the bumblebee get around more lively than the hive bee? Is it the general rule that speed increases with size? Speed or endurance either? In working up a fast breed of horses, do they increase size? Are the largest birds the swiftest? Did you never watch a crow or some other large bird with a small bird making circles all around it, the big bird trying in vain to get away from its tormentor?

There is more hope, probably, for success in his other suggestion to get longer proboscis to work on red clover. That was talked of long ago, but as yet no progress has been reported. E. E. Hasty had some experiments under way to get red clover blossoms down to fit the bees, but I don't know how far he succeeded.

The idea that drones are generally raised in enlarged worker cells is not in accordance with the state of affairs in my apiary, and I doubt if it is anywhere. I use full sheets of worker foundation, and practise cutting out drone comb, but the bees always manage to get more drones than I want. As they always make fresh drone cells (not enlarged worker cells), am I not always giving the bees the chance to make just as large drone cells as they will?

Will larger cells make larger bees? Have you forgotten the foundation that A. I. Root was anathematized for making, years ago? You ask, friend Alley, for cells not quite as large as drone cells, in which to raise large workers. Well, his was just about half way between drone and worker. Sometimes the bees raised workers in it and sometimes drones. But the workers didn't appear any larger than those raised in common worker cells. I have seen workers hatch out of drone cells, and I couldn't see any increase of size.

Besides, suppose you could get them to raise larger bees in larger cells, and had a whole hive of them. When that same colony went to raise a queen, what difference would it make? Wouldn't the egg laid in the queen cell be just the same as if ordinary workers had been raised from previous eggs?

But there's some hope on the red clover side. Go in on that.

THAT "QUEEN-STINGING-BEE" STORY.

I suppose you refer on page 29 to the two cases reported by me, in which I saw a young queen sting a worker. You say "no one will believe that story." In that I think you are in error. I know that it is believed by some, and I suspect by a good many. Will you please tell us why you don't believe it? Have I established such a reputation for untruthfulness that you are safe in saying it cannot be so, just because the statement comes from me? Or am I to doubt the evidence of my own eyes just because the sight did not first meet the eyes of Henry Alley? Come, friend Alley, that won't do, even if you tell me not to "jaw." In each case I saw a lively looking worker taken into the apparent embrace of the queen, then immediately let go, and that worker was dead, dead. Did it die of a fit or a sting?

Marengo, Ill. C. C. MILLER.

So far as raising larger bees is concerned, the above is respectfully referred to Bro. Smith. We think you can tell the truth Bro. Miller, but you are as liable to be deceived as other people. Don't you think you are?

Bro. Miller is manufacturing jokes at our expense, something we enjoy very much We are only trying to keep our end up, Bro. M., so "jaw" away.—ED.]

FOREIGN NOTES.

Friend Newman of the A. B. J. publishes again the German bee-laws. It is a mistake; this law has never been enacted and Germany, like this country, has no bee law as yet. Didn't friend Newman read "Foreign Notes" in the June issue of the API?

Mr. Rauschenfets in Italy, editor of the *Apicolture* found by experiments that bee-brood, nymphs, larvæ and eggs will die at a temperature as low as 32° F. If the temperature is lower than 32° the brood will die in about an hour.

A frame of brood taken from the hive and kept in a decreasing temperature will show that at 40° the larvæ will chill and stop eating. Larvæ not exposed more than two or three hours to such low temperature will when replaced in the hive show some signs of life, but much of it will perish. The same low temperature that will kill the larvæ will kill the embryo in the egg. The author concludes from his experiments that a short revision of a colony in early spring or in winter will do no damage to the brood. This is in accordance with our experience.

It is estimated that in the province of Hanover, Germany, 200,000 colonies of bees were wintered 1889 and the honey raised that year was worth over 4½ millions of marks (over one million dollars). Among these 200,000 hives there are not more than ten or twelve thousand frame-hives; the rest are straw skeps. In other parts of Germany there are probably a much less number of colonies, but more frame-hives proportionately.

Many able writers in Germany recommend having a great amount of pollen in the hive before winter time, to secure a good wintering. How is this compared with the pollen theory?

Several remedies for foul-brood are recommended: sulfaminol and betanaphtol. What next?

Mr. W. Abram of Australia received from Mr. Lamberteughi of Italy, three queens, which were on the road just two months; two of them arrived alive. I mention this because it is said that the worker bees would not stand such a long journey.

Selma, Texas. L. STACHELHAUSEN.

DEAD BEES ABOUT THE ENTRANCE.

During the winter season, it is very common to see quite a number of dead bees about the entrances of the hives. Many become alarmed at the sight of this, and conclude that there is something wrong, and, in their ignorance, tear up the colony, to make an examination, only to find that all is apparently right. This untimely handling and disturbance in cold weather is very hurtful to the bees, and in all such cases there is no indication of anything wrong.

Bees die off daily, in great numbers, throughout the entire year, but during warm weather, when they have the liberty to fly every day, these dead ones are carried off by the colony, and they disappear unnoticed by us. But, during winter, they die and drop to the bottom-board and collect there, and on the approach of a warm day, the bees carry them to the entrance and drop them outside. It is not unusual to find quire a handful of dead bees lying at the entrance, on such occasions. There may, at times, be as many as a pint of them, and no serious damage may be expected. All unprotected hives will produce more of these dead bees than those that are well protected.—A. H. DUFF, *in the National Stockman.*

FERTILIZATION OF PLANTS.

Bees serve as active agents in the fertilization of plants, and are not destructive in the least degree. They are profitable, because they gather and store up that which would be entirely lost, without their aid. They work in places that are rarely seen, and the fence-corners and neglected spots are often valuable pasture fields for them. Though regarded as resentful in nature, yet they can be cared for easily, for, like animals, they are conquered by kindness.—*Exchange.*

CHIPS AND SHAVINGS.

INTERESTING NOTES OF PRACTICAL VALUE. CONDUCTED BY E. L. PRATT.

Rambler gave us another article last month, to which we can say amen.

Father Root is acting as "ballast" to *Gleanings*. He thinks Ernest too progressive.

Should think that cloth would make a good roof for bee-hives if laid in paint, tacked on and painted again.

If all the journals are going into the "cream" business, where are they going to get their milk to skim? Would a skim-milk bee-paper pay?

Life is too short to wade through the long strung-out articles of the old style writers. There is no need of using every word in the dictionary to make a point clear.

"Do it now" is a good motto for the beekeeper, especially in such matters as ordering supplies, preparing for a harvest, attending to the wants of needy colonies, etc.

That man Smith of Wellesley Hills is indeed "in it." To make proper answer to his brief well-put question requires considerable thought. I confess I am not prepared to touch it as yet.

Should think it would be a poor idea for the Beekeepers' Union to adopt a trade mark. Better force the adulteration bill and get government stamps, as the farmers did for the Oleo. men.

Mr. O. R. Coe is a man of considerable courage. He proposes moving a carload of bees this winter from Windham, N. Y., to the Alfalfa field of Col. Hope; he will send on full reports of the scheme.

H. R. Boardman has a wax extractor which is provided with ventilators and can be used as a honey evaporator. It is made large enough to take in eight or ten frames of honey at one time. The whole thing is supported on iron rockers for ease in turning to the sun.

Of course an unpainted hive is more absorbent and, perhaps, better for the bees; but what of the looks? The outside case solves this problem. An unpainted hive covered with a thin outside case is all that could be desired. The outside case should be well painted with white lead.

There is a secret pleasure in hearing ourselves praised; but on such occasions a worthy mind will rather resolve to merit the praise, than to be puffed up with it. —A. B. J.

The above remark is typical of the editor of *The American Bee Journal*. It shows a spirit few men possess.

"It is no use to try to keep bees pure, if you have hybrids or black bees in your vicinity, or anywhere within three miles of your apiary."—J. M. YOUNG

Want to know if it isn't. I guess a way could be found if we read up and keep posted. What is the matter with a trap for this purpose. By using the trap we may even select the drones to mate with the queens; even if there are a dozen races in the same yard.

E. A. Baldwin, of West Upton, Mass., has sent us his "Automatic Foundation-Holding Frame" The top bar has a slit in it, and the bottom bar has a groove. The foundation is intended to be slid down through the top-bar, and rest in the slit of the bottom-bar.—A. B. J.

The above arrangement is about the same as recommended by the API, with the exception of the slit in the bottom-bar which we have found to be impracticable.

The testimony of all apiarists has been against anything less than ⅞ inch for the walls of the hive; but here will be a chance for somebody to test the matter.—*Gleanings*.

The matter has been tested and found better than seven-eighths. We have said for a long time that seven-eighth inch hives were on their last legs, and that the thin hive with a thin outside case would supersede the clumsy ⅞ inch hive. Thin hives have been used in the Bay State apiary the past seven years. The walls of the inside and outside hives are but ⅜ of an inch thick.

A good deal is said in the *Apiculturist* about yellow Carniolans. If they resemble the Italians at all, how are we to distinguish them from the bees from sunny Italy? The typical Carniolans we have tested seem different from Italians only in color.—*Gleanings.*

Yellow Carniolans, are *very* gentle, the queens extremely large, and prolific. They have a different shade of yellow and the markings are not like the Italians.

In very cold weather, the moisture coming from the bees condenses about the cluster. In order to keep from freezing, the bees lick it up and by overloading their stomachs with water they contract what is called diarrhea.

Moisture condenses on the coldest wall and that is the outside wall.

If outside cases are used the moisture is taken entirely away from the bees and they will winter well, even if the hive contains pollen.

Wish *Gleanings* would continue their editorial department to the same extent as in Jan. 15 number. It was the most interesting part of the publication. A paper without a good editorial department is like a man without a heart.

I think Dr. Miller is off his "Caboose" in recommending full sheets of foundation at all times. He is old enough to know better than to hive new swarms upon all full sheets of foundation. He must be in league with some foundation manufacturer

I do not want kerosene oil in the honey I am going to eat. If those California fellows would buy a ten cent can of potash and mix it with two buckets of water they could clean ten carloads of oil cans in a few days and save "kicks" from the eastern market.

A government station can conduct experiments that would be too expensive for an individual or company, therefore I say it is desirable to induce the government to give apiculture more attention and place men in charge of the stations who have more than one idea.

NOTES AND COMMENTS.

Under this head will be included apicultural news and comments thereon.

SPRINGING BEES.

Why not say springing bees as well as wintering bees? Most any one with a proper hive can winter bees, but it requires some experience to spring them and to bring the colonies up rapidly early in the season.

In order to get brood-rearing started early in the spring the brood-chamber should be warmly packed, and if short of stores, food in some form should be given. I know of no better food than pulverized sugar and honey, and no better way to feed it than by placing a piece of heavy paper on the frames, and then putting the food right upon the paper, and letting the mat and cushion come directly down on the food. As this food is in a semi-solid form, it will not excite the bees as liquid food does. There is no danger of the moisture from the colony softening the food so that it will run and daub the bees. The bees will cluster close to it and will not be in the least disturbed by its presence in the hive.

Later on, and when the weather is warmer, in fact so warm that the bees can fly about every day, it will do to feed liquid food. This can be done with most any kind of a feeder that has been recommended in the various bee-papers. Liquid food may be granulated sugar and water; say to each three pounds of sugar, add one pound of water.

BEE CRANKS.

A man by the name of Bunch desires the readers of the *American Bee Journal* to understand that no bee fixtures of any kind are of the least account except those he uses. To show what a remarkably wonderful and brainy fellow he is we make the following quotations:

"A hive that gives the best satisfaction to me, for a summer and winter hive, is made as follows: Make the brood-chamber, sides and ends, of 1⅛ inch pine plank, and the supers of ⅞ inch lumber."

There! friends, if you wish to follow

that fellow's advice you have our full consent. In our opinion, there is not another beekeeper in the world who can be found using such a hive or one who will accept of such advice as this man Bunch gives.

Here is another thing that we know must be new to the practical beekeeper.

"Good substantial hives, or cheap ones, made of ⅞ inch lumber, are in great demand, particularly now that honey is so very cheap."

It cannot be that the writer of the above reads any first-class bee-paper or he would know that all practical beekeepers are adopting hives made of ⅞ inch boards.

After a general raking down of other people's goods this little Bunch makes the following remark:

"I think there is as much prospect of their coming into general use as some of the swarm-hivers, and other bee-fixtures."

Bunch has tried hard to show beekeepers that he is a big Bunch. His remarks are mostly aimed at the API and the goods we offer for sale.

We will inform him and all other cranks who succeed in getting their nonsense and semi-personal remarks published in the *American Bee Journal*, that the swarm-hiver is coming into general use and that it is a success, too, and all this notwithstanding the fact that Bunch had no hand in its invention.

Bunch recommends making the sides and ends of bee-hives of 1⅝ inch stuff. This fact alone is sufficient to show that such a man has had little or no experience in bee culture. In his article the above quotations were taken, this same Bunch says his objection to thin hives is that they cost too much. If a hive ⅞ inch thick is costly, what will be the cost of one 1⅝ inch thick?

Here is a word from a beekeeper who has used the thin hive. The item was taken from the same number of the *American Bee Journal*, as the quotations were from Bunch.

THE BAY STATE HIVE.

The hive I use is very much like the Bay State hive, and I think it is the best and cheapest in existence for wintering on the Summer stands. I have also used "the thin hive," that is, I put a divison-board in the middle, and have a colony on each side of it. One entrance faces the east, and the other the west. This is very good for winter, but is rather cumbrous when I want to move it. Closed-end frames are much used in New York State.—J. H. BLANKEN.

Jersey City, N. J., Dec. 20, 1890.

The difference between the two writers is this: Bunch is sore about something, while Blanken is writing from honest motives.—ED.]

THE SELF HIVER.

Friend Alley has improved his self-hiver somewhat, and it is likely it will now work much better than it did last summer. I am satisfied, however, that I have a much better arrangement than he has now figured in his journal, but of this nothing further will be said till it has been thoroughly tested next June.

WE find the above in the *Western Plowman* and from the pen of C. H. Dibbern. Mr. D. says he has a better arrangement for self hiving swarms than our automatic hiver. While we have given proof in these columns that ours has self-hived more or less swarms, there is not a case on record where any other swarmer has ever hived even one swarm of bees. We are ready to wage a small sum that not one of the swarmers described by other people have ever hived a swarm of bees, and that they never will until their construction is modified. Self-hivers were thoroughly tested in the Bay State Apiary last year, and we know what will work and what is not practical. We will not wait till next June to tell you all about it. We tell you what happened last June. Dibbern's swarmer is not yet practical; never did work successfully and probably never will. Why not tell us how you succeeded in 1890 and not wait till 1891?

The reason is plain to all. The fact is, D. and several others have cooked up a swarmer from what they have learned about ours, and they have a notion that

they will do big things *next June* or some other time later on. Now we are ready to guarantee that *our* swarmer will catch every swarm that issues, and hive ninety-nine per cent of them. Our swarmer so far as we know is the only one extant that has ever hived a swarm of bees.—H. ALLEY.

CLIPPING THE WINGS OF QUEENS.

QUERY 746.—Please give your method of clipping the wings of queen-bees. —Lewis.

I let them be.—J. M. HAMBAUGH

I clip all queens' wings in my mind. —H. D. CUTTING.

We do not clip the queen's wings, but if it is thought necessary, clip the tip of both wings.—DADANT & SON.

Oh, my! I always have the "buck ague" when I attempt it. Ask some one else.—MRS. L. HARRISON.

My way of clipping a queen's wings is not to clip them at all. The queen-and-drone trap has made this a proceeding worse than useless.—C. H. DIBBERN.

The above is taken from "Queries and Replies" in the *American Bee Journal*, and it is so nicely in accord with our opinions so often expressed in these columns that it is a pleasure to read the above. We do not and never did believe in clipping the wings of any queens. As C. H. Dibbern says, the drone-and-queen trap is far better than mutilating the wings of a queen.—ED.]

A beekeeper who has ordered a Bay State hive desires to know if the Bay State frames "sag." They do not. Brood frames having a narrow, thin top-bar always sag. The Bay State hive has no such frames.

The same correspondent also wishes us to inform him as to the time a queen commences to lay in the spring.

This depends something upon the weather. With several warm days in February, say such days as bees can take a flight, the queens usually commence to deposit a few eggs. However, not much brood will be found in many colonies till near the middle of April.

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EDITORIAL NOTES.

We have not been obliged to inform our readers that we publish the cream of apicultural news. Look over our columns and see if this is not so.

Progress is a word often misconstrued. A really progressive person will never call his brother's attempts vain, but will take from them points and adapt them to things more progressive.

Some of the new bee-papers are pretty slow about getting around. Several have not come in as yet. By the way, where is the Beekeeper's Guide? We have received no copy since the Dec., 1890, issue.

Look well after your colonies during the next sixty days as during this period bees pass through the most trying part of the winter season. Pack warm and see that all have sufficient stores to prevent them from starving.

All the encouragement possible is due a worthy inventor and the government has seen fit to protect his inventions. There are no grounds for grumbling so long as there is a value on money. We are not *forced* to buy a patented article and the inventor will learn his lesson well if it is without merit. On the other hand, the purchaser of a worthless patented article will not soon forget his experience.

If the moisture is handled as it should be in a modern hive, cold weather will not injure the bees in the least. If they are well provided with wholesome food, a long duration of extremely cold weather will not harm them. The slickest manner of ridding the cluster of moisture that I know of is a thin

outside case without packing, and a thin unpainted brood-chamber covered with a cushion.

F. D. Lacy has an arrangement he calls "The New Idea." A cage of some kind is placed before the entrance of each hive in which the bees receive feed, if necessary. The hives are kept in a light warm room, and the bees allowed to fly in and out of their entrances as they choose. He says the bees he is treating in this manner are doing better than those in the cellar. The character of the device will be kept secret until success attends it.

Brother James Heddon has come out with a new hive. We wish Bro. H. would come out with a good article on Bee culture for the Api. The last we received from him was returned because we were not willing to let Brother H. use our columns to "blow up" a friend and one of our best writers. Brother H got pretty mad about it. We supposed he would forget it, and think he will after a while. If this does not draw him out, we will try again.

Dealers in supplies are on the increase. Some will succeed, others will go to the wall. Some people have an idea that if they can get ten cents by spending twenty cents in advertising they are making money. There really is not room for so many dealers in Beekeepers' Supplies.

In the January 15th number of *Gleanings*, A. I. Root recommends leaving the great questions of the day in the unmerciful hands of the question department, a worthless string of words, words that seldom give the reader any satisfaction. The Api was the first to start this style of literature and the first to discard it as utterly worthless. Yes and No answers decide nothing and consume valuable space. One brief, well-written article by an experienced apiarist carries more weight than a dozen columns of that rubbish under the head of "Query Department."

THE COMING WORLD'S COLUMBIAN FAIR.

Would it not be a good plan for the leading beekeepers of such States as have no beekeepers' societies to get together and organize, or, by correspondence, agree upon some plan, and appoint suitable persons to look after the needful legislation and appropriation, and for doing all other needed work? for, if this matter is left over till next winter, it may be too late.—*A. B. J.*

We want the beekeepers of Massachusetts who are interested in this matter to send suggestions. We should organize at once or by correspondence agree upon some plan and appoint suitable persons to look after the needed legislation and appropriation by the State of Massachusetts.

We suggest Brother E. L. Pratt as a proper person to attend to the matter for Massachusetts beekeepers.

SPRAYING FRUIT TREES WITH POISON.

A law is needed against spraying fruit trees with poison while they are in bloom. A correspondent writes about it as follows:

It seems to me that the matter of spraying fruit trees while in bloom, and the consequent poisoning of bees, is something that might well occupy the attention of the Union. Much spraying will be done in the southern part of Illinois, hereafter, and, of course, ignorant or malicious people will do enough of it while the trees are in bloom to poison many colonies of bees.

A friend, living some twelve miles away, lost sixty or seventy colonies that way, last spring. Cannot the Beekeeper's Union get a law passed in our legislature, this winter to make it a misdemeanor, with suitable penalties, to spray fruit trees while in bloom.

Such a law would benefit the fruit growers hardly less than it would beekeepers.

T. P. Andrews, *Farina, Ill.*

We need some new law here in Massachusetts, on this same point. It is now most too late to take the matter to our legislature this year, as the date for receiving new business has passed, Had the matter been brought to our notice sooner we would have made an

effort to have had something done about it this year. However late, we will make the attempt at once.

In the town of Wenham there are thousands of apple trees. Each year all the foliage is eaten off early in June by the canker worms. Some of our fruit growers are foolish enough to spray their trees with paris green while they are in bloom. One man did this last year against our earnest protest. In less than an hour after the trees were sprayed, a heavy shower washed them clean. We didn't cry about it.

BEE SUPPLIES.

We have made arrangements with Messrs. Tomlinson and Satterthwaite, No. 16 North Warren Street, Trenton, New Jersey to handle our goods and general supplies.

The Bay State Bee-hive, Drone-and-queen traps, Self-hiver, Sections, Foundation and in fact a full supply of the best and most useful and practical implements used in the Apiary, can be found at their store. Save freight and express charges by purchasing of them.

J. H. M. Cook, 78 Barclay Street, New York, will supply our drone-and-queen trap to his customers the coming season. A. I. Root, Medina, Ohio, Thomas G. Newman and Son, 246 East Madison Street, Chicago, Ill., also the W. T. Falconer Mfg. Co., Jamestown, N. Y., G. B. Lewis Co., Watertown, Wis., will do the same.

Lewis Co. will also manufacture our Bay State Bee-Hive if any of our western friends desire them. If any one orders one dozen hives we will have them sawed at the above factory.

D. A. Jones will furnish our Canadian friends with the self-hiver as well as the drone-and-queen traps.

THOSE OUTSIDE WINTER CASES.

These seem to be doing nicely so far in our apiary. The bees seem to be in just as nice condition as those in large chaff hives. So far we feel very much encouraged as to their ultimate success.—*Gleanings, Jan.* 15, 1891.

Bro. Root seems to be finding out that bees can be wintered as well without chaff packing at the sides of the hive as they can with. Chaff packing is a detriment to a colony of bees in winter. It is a useless expense and trouble. We have forty colonies of bees in the Bay State Hive on the summer stands, no packing except over the frames. If anyone can show as many colonies in better condition we would be glad to go a good ways to see them.

THE CLOSED-END FRAME.

Capt. Hetherington has from 3,000 to 4,000 colonies of bees, while P. H. Elwood, also of Otsego county, N. Y., and formerly his partner, has 1,300. They use the Quinby hive with the closed-end standing frame. Many others in New York State, having from 400 to 500 colonies, use either this frame or the Hoffman partly closed-end hanging frame.—*Farm and Home.*

PRICE OF THE BAY STATE HIVE.

After March 10 the prices of this hive will be as follows:

One or more hives complete $3.00.

In the flat, by the half dozen, each $2.50.

Prices of the drone-and-queen traps will also be advanced to the regular rates: viz: Per half dozen, $2.00. Per dozen, $3 50.

We are now getting a large number of orders for these goods and desire to get over the most of this class of trade before our queen-rearing business begins.

WE WANT BEES.

We shall need fifty colonies of bees to use in queen rearing in the season of 1891. Who can supply them and at what price? The price must be low, colonies strong and free of any disease. We want no foul brood stocks, nor any bees that have been exposed to this disease. The style of hive the bees are in is of no account to us, as they will be taken out of them.

We are ready to exchange queens or any of the goods in which we deal for bees. Now if any of the small beekeepers desire to send us three or four colonies in exchange for supplies just say the word and we will arrange the matter. Write us at once and say how many you can spare and what you desire in exchange for them.

STORIFYING HIVES AND THE USES OF THE QUEEN EXCLUDER.

In the economical and profitable production of comb honey it was shown in my last article that a modified hive from those in general use embracing the storifying principle is needed, that a small brood chamber is alone adapted to the use of the queen excluder. After nearly ten years of practice in contracting the brood nest, beekeepers have generally decided that six Langstroth frames or its equivalent is the limit of profitable contraction. The various reasons why this is so it is unnecessary to discuss here, but it is certain that on a shallow brood nest of this capacity such as we need in the best farm of the storifying hive we must use a queen excluder to keep the queen out of the sections. With frames as deep as the Gallup and American it is true that there is less tendency for the queen to enter the sections when the brood nest is contracted, but the difficulties of supporting on such frames are so great that a storifying hive of this kind cannot be successfully operated and this same trouble exists to some extent with the standand L. frame. In other words, the contracted brood nest must present a suitable surface on top to place a sufficient number of sections for the bees to work to advantage. This number is not less than twenty-four one-pound sections. A brood chamber of the capacity of six standard L. frames must therefore of necessity be flat and shallow and it is this that has brought me to the use of eight brood frames 7 inches deep and about 17 inches long for a brood nest. On this we are obliged to use the queen excluder below the sections and without it a storifying hive of this description for the production of comb honey is impracticable.

But the matter of keeping the queen out of the sections is *only one* of the many valuable uses of the queen excluder. At the same time that by its use we keep the queens out of the sections, we are able to so far prevent all burr-combs that this trouble which is common to nearly all the standard hives in use ceases to exist with this hive. It enables us to take apart the hives quickly and easily in all needed operations without great disturbance of the bees when actively storing honey, and what is most important of all, it enables us to get the largest possible yield of comb honey and compels the bees to use economically any surplus the beekeeper may leave them for winter so that feeding for winter is seldom required.

Add to these facts the great advantages in successful wintering over other hives when two stories of these shallow brood chambers are used and the further fact that two stories are needed in the most successful spring breeding and we begin to see some of the reasons for modifying the hives in general use if we are ever to have an economical and profitable system of beekeeping.

As to burr-combs the queen excluder will prevent them whenever we place a set of empty combs, or combs partly built, or combs on which the bees are at work above them. This grand fact was first made known in the Api, Feb. issue of 1890. In commencing to build new comb the instinct of the bees is to extend the work from the combs of the brood-nest, but if we extend the work for them in the manner indicated to begin with they build no burr-combs.

Hence, if we take a two story hive full of brood at the beginning of the honey flow, and put a queen excluder and a case of sections between the stories with the queen in the lower story, there will be no burr-combs built as long as plenty of surplus room is provided between the stories. Now at the beginning of the honey flow, or as soon as a colony is ready for the sections, I recommend this practice in putting on all sections. We may either smoke the queen down into the lower story to begin with, or we may put on the sections as advised, placing the upper story of brood on top; and then, in four days, take out a central frame and if eggs are seen hunt up the queen and run her in at the entrance to the lower story. When

swarming takes place the new management given in my book should be carried out to the letter.

I believe this new system will be greatly enhanced in many respects by the use of the new swarm-hiver or swarm controller, as it should be more properly called, when used in carrying out this new system of management. Friend Alley in giving us the drone-and-queen trap has placed all beekeepers who have learned its value under obligations to him and now there is every reason to believe that his new swarm controller will become even more indispensable to the successful apiarist.

DR. G. L. TINKER.

New Phila., Ohio.

[*To be continued.*]

PREVENTING AFTER SWARMS.

By the use of the queen-excluder, queen cells can be kept on hand at all times during the swarming season. I have found by experiment that if the queen cells are destroyed as soon as a swarm issues and the colony given a queen cell nearly ready to hatch, or if a virgin queen is introduced no further effort will be made to build cells and no after swarms will issue. The chief advantage of this plan is, the work is all done at time of swarming, and we don't have to keep trace of the hive any further.

OLD QUEENS.

I discovered years ago that old queens were a source of annoyance at swarming time. Colonies with old queens are not only persistent swarmers at the start, but the swarms are likely to cast swarms, and the bees are restless and unprofitable till the old queen is superseded. My plan to settle the matter at once is to remove the old queen when the first swarm is hived. The combs containing brood are removed from the brood-chamber and their places supplied with empty combs. A queen cell nearly ready to hatch is grafted into one of the combs, and a queen excluder, is placed over the top of the brood chamber, and the combs of brood in a hive body is set on the queen excluder, and the swarm is hived back without the queen. The young queen soon hatches below the excluder, and the cell above the excluder has never interfered in all my experience. A colony treated in this way makes the very best of working colonies. Besides it is the cheapest way to requeen without danger of "after swarms."

THE USE OF SEALED BROOD.

In the manipulation of bees, sealed brood with no eggs or larvæ in the cells, can be used in many ways to great advantage. Such combs can be had at all times during the breeding season by placing combs of brood above the queen excluder till all the larvæ is sealed and the young bees begin to hatch out rapidly. By placing such combs in an upper story over a wire cloth excluder, virgin queens of any age, and very valuable queens on which no risk is to be taken can be introduced without the slightest risk. As soon as enough of the young bees have hatched to make a strong nucleus, they are given a stand to themselves and soon build up to a strong colony. Such combs are exceedingly useful to build up queen rearing colonies and cell building colonies, as they contain no eggs or larvæ to attract the attention of the bees from their work of building cells from the selected stock given them.

CANDY FOR QUEEN CAGES.

I use compressed candied honey tempered with powdered sugar. No bee candy that has ever been formulated is equal to my candy for queen cages. Before Mr. Good published his mode of mixing granulated sugar and honey, I used the compressed honey candy, sending Dr. Morrison of Illinois, a queen and he returned me a queen in the same cage without a new supply of candy.

G. W. DEMAREE.

Christiansburg, Ky.

SEASONABLE HINTS.

Snow around the hives is no detriment. It is porous, and enough air can penetrate it, for ventilation, in winter. When it forms ice at the entrance, then it must be cleaned away. An examination during and after a thaw, is very necessary.

Do not be alarmed if you find a few dead bees at the entrance of your hives. A few of them will naturally die of old age, and to have the survivors carry them out when the temperature will permit, is an indication of vigor.

The wise beekeeper will now lay his plans for next season's work; provide his hives with surplus boxes, frames, and, above all, inform himself as to the operations of successful beekeeping. To do this, he should take at least one bee-paper, for in no other way can one so well inform himself as by the records of those who are making bee culture a success. It will enable the expert to keep up with the times, and the beginner to acquaint himself with not only the necessary but the best fixtures, in order to begin intelligently, and to continue in the right direction.—WALTER S. POUDER, in the *Indiana Farmer*.

The above is good advice. W. S. P. should send his articles to the bee-papers; then they would reach a larger number of people engaged in bee culture.—ED.

COLOR FOR HIVES.

In painting hives, dark colors should be avoided, for in extreme hot weather the combs in such hives will melt down, while in a hive which is painted white, no damage will be done. Such melting down of combs often comes in the times of scarcity of honey in the fields, so that robbing is started by the honey running from the hive, when the inmates are in no condition to defend themselves; and from this cause, and the spoiled combs, much damage is done.—*Farm Stock and Home*.

DIFFERENT RACES OF BEES.

Dalmatian bees are easy to manage, and excel in making comb-honey. The Hymettus bees of Attica are much like Carniolans except in disposition. Palestines come from the Holy Land, and are often confused with Syrians, to which they are inferior. They use more propolis than any other variety, and are troubled with more laying workers, but are said to be even more beautiful than Cyprians. Egyptian bees, found in Egypt, Arabia, and Asia Minor, have yellow bands, and are smaller than Italians. Although they have long been domesticated in Egypt, where floating apiaries were common, they have been found vicious by European beekeepers who introduced them. Their cells are smaller than those of other species. Some naturalists believe yellow bees originated from them instead of from Syrians.—*Farm Life*.

APICULTURIST MAIL BOX.

TWO GOOD PAPERS.

Elgin, Ill.

MR. HENRY ALLEY: Herewith find amount for API 1891. I am a comb-honey producer, the API and the *American Bee Journal* being my helping hand in bee culture for more than three seasons. They are always full of practical ideas.

FRANK BLACKA.

BEES DID WELL.

New Denmark, C. B., Ca.

HENRY ALLEY ESQ.: The four queens and four pound bees I got of you last June came in splendid condition The queens are the handsomest I ever saw; the worker bees reared from them are all 3-banded, very industrious and gentle, good natured and easy to handle.

EDWARD ABELDGAARD.

MORE PRACTICAL THAN ANY OTHER.

Glen Rock, Neb.

MR. HENRY ALLEY: Enclosed find amount for API, 1892. I must have the APICULTURIST. I look upon it as more practical than any other. though we have several other good bee journals.

C. L. COOK.

IT IS PRACTICAL.

Stamford, N. Y.

MR. ALLEY: The queen I got of you last summer was a fine one and arrived in fine condition. Was offered $1.25 for her before I left the Post Office.

Well, I introduced her by the Dr. Tinker

method and lost her; but I am going to try till I make a success if it takes ten years. Look out for my order in the spring. "Api" suits me because I don't have to read it so much to find an idea and *because it is practical.*

JOHN E. ROGERS.

HANDSOME IS THAT HANDSOME DOES.

Connellsville, Pa

MR. ALLEY: I had a queen from you and an Alley queen from Row of Greensburg and the bees proved so very gentle, especially the progeny of the queen I had of you (no taffy) that I shall introduce all Alley queens the coming summer. I never received a sting from the bees in the Alley colony last season, and the queen filled a 10-frame Simplicity hive (the only one I have—my banner colony) with bees and they gave me the largest surplus by large odds notwithstanding it was a very poor season. They always worked when other colonies were idle.

J. B. ENOS.

THE DRONE AND-QUEEN TRAPS AT REDUCED PRICES.

We have received from the factory a large number of drone-and-queen traps. If any one is disposed to purchase them at this time we shall sell half dozen in flat, one made, seven traps in all, and give the purchaser an individual right to manufacture the traps for his own use for the small sum of $3.00. If you wish one dozen traps (13) and individual right, we will ship them for $4.00. Those who purchase fifty traps, price $10, will get an individual right to make the traps, also the API one year free.

Now let me tell you something that all of you, or many of you, do not know about; at least nine out of every ten persons do not. Do you know that you can sell any or all the traps you purchase of us in any place in the United States where the territory is not sold? You can come into our town and sell these traps if they were purchased of us in the first place.

Now if we sell you one dozen traps (13) you can sell every one of them for 50 cents each. This will be $6.50. You then have the right to make all you can use in your own apiary.

Those who have an individual right to make the traps, can obtain the material for them from their nearest dealer. A person who owns a right to use and manufacture a patented article has the right to get his goods manufactured just where he selects. So you see it will pay you to purchase an individual right in any case, as by so doing you can more than save the price of it in express charges on one dozen traps.

We want agents to sell the traps in every county in the United States; also agents to introduce the Self-hiver into every apiary in America. Pay liberal.

If any subscriber desires to examine one of our improved Drone-and-queen Controllers, we will mail it for thirty-five cents, or, the API and Controller for $1.10.

The API and one of our improved Self-hivers will be mailed for $1.50.

OUR ONE-HUNDRED DOLLAR QUEEN.

Bear in mind that each subscriber to the APICULTURIST is entitled to one of the best queens reared from our one-hundred dollar queen, by remitting seventy-five cents when the queen is wanted.

PRICES OF QUEENS TO SUBSCRIBERS OF THE APICULTURIST.

We beg to remind all subscribers to the API that they can get one of our best *select Italian queens* by remitting seventy-five cents at the time the queen is wanted. The regular price of such queens is $1.25.

If any subscriber prefers one of our *select golden Carniolan queens*, the same as we charge $2 for, one will be sent for $1 75, or, two queens and the API will be sent for $3 50. The queens may be ordered and paid for when wanted. No queens will be mailed before May 20, 1891.

GOOD AIR AND GOOD HONEY.

My advice for ladies who are but sickly house-plants, is to engage in something that will call them outside into the bright sunshine. I know of nothing better calculated to interest and instruct, and at the same time to remunerate for labor bestowed, than beekeeping and poultry-raising combined.—*Exchange.*

Alley's Improved Automatic Swarm-hiver.

Sometime ago it was stated in the AMERICAN APICULTURIST that we had so improved the Self-hiver that it would prove successful in hiving ninety-nine per cent of all swarms issuing from hives where it is used.

During the swarming season of 1890 experiments were conducted in the Bay State Apiary with various devices for hiving swarms of bees automatically.

The Self-hiver sent out in the season of 1890 failed to self-hive *all* the swarms that issued through it. The queen could not seem to find her way to new hive through the cone tube at the end of the swarmer as readily as she does the tube in the drone and queen trap. We saw at once how to remedy the trouble. The Self-hiver here described is the result of experiments conducted by us in the year 1890. Figs. 1 and 2 give the reader some idea how the improved Self-hiver is constructed.

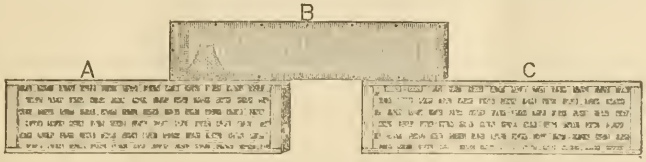
When a swarm issues the queen is checked at the entrance of the hive by the excluding metal in Box A. The worker bees have no difficulty in passing the perforations and going into the air as they usually do when a swarm issues. But the queen being much larger cannot pass the metal to take wing and join the swarm as they do when no self hiver is used. When the bees find they have no queen with them they at once return to the location from which they started. In the meantime a few young bees have found their queen in trap C and all the bees of the returning swarm join her and enter the new hive, thus hiving themselves.

When the queen comes out into box A she readily finds her way up into box B, and then down through the cone-tube in box C. When a queen has once passed through either one of the tubes she cannot return. By the time the queen has found her way into box C the bees have missed her and return and hive themselves in the new hive.

The reader, of course, understands that box A is placed at the entrance of the hive from which a swarm is expected. Box C is placed at the entrance of the new hive, or at the entrance of the hive the new swarm is to occupy. The two hives are then connected by placing box B upon boxes A and C as shown in the illustration. All egress or ingress to the hives except through the metal must be closed to prevent the queen from taking wing and joining the bees.

The Swarmer, as now made, is not adapted to all styles of hives in use. In some cases it will be necessary to make some slight changes in its construction. For this reason we advise all who wish to use the Swarmer that the better plan is to buy an individual right to make and use them. Then get out a model of the Swarmer to fit your particular hive and send to the nearest supply dealer for your goods, providing of course he can supply them.

Will say to those who purchased the Swarmers sent out last year that they can easily be altered to the new style. Write for particulars.



The Self-hiver may also be utilized as a queen trap by placing box B upon box A, as shown in

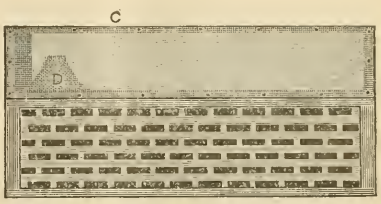


Fig. 2.

Fig. 2 and you have a complete drone-and-queen trap.

Directions for using the self-hiver.

Place the Swarmer at the entrance of the hive about the time a colony is strong enough to swarm. Twelve days after the first swarm issues the Swarmer should be removed.

These directions also apply to the use of the drone-and queen trap.

If many drones are entrapped in either the swarmer or trap, they should be removed. Early in the morning is the best time to do it.

If box B is not long enough to connect the new hive with the old one just make a longer box, using the same cone tubes. Prices on another page.

HILL'S BEE-FEEDER AND BEE-SMOKER.

This Smoker burns chips or hard wood without any special preparation. Very reliable. Greatest Smoking capacity. Easiest to start and cheapest because it saves time.

The Best Bee-Feeder. Most convenient for the bees. No drowning or daubing bees. The feed is taken by the bees without leaving the cluster. From two to seven feeders full may be given a colony at one time which will be stored in the combs in ten or twelve hours.

Smoker, 3-inch barrel, Freight or Express, each $1.20; by Mail, $1.40; per Dozen, $10.80. Feeders, One Quart, Freight or Express, per Pair, 30c; by Mail, 40c.; per Dozen, $1.80. Address. A. G. HILL, Kendallville, Ind., or H. M. HILL, Paola, Kansas.

PRICES OF SUPPLIES

—SOLD AT THE—

BAY STATE APIARY,

WENHAM, MASS.

Bee-Hives.

We offer only the Bay State hive for sale.

One hive complete,	$ 3.00
Six hives in the flat,	13.00
Twelve " " " "	each 2.00

All parts of the Hive are included in the above, frames, sections and all but paint and nails.

Sections.

One-piece sections per	1,000	$4.50
" " " "	500	2.50
" " " "	100	.60

Langstroth Frames.

Material for (hanging) frames for Standard L. Hive per 100.....$1.00

The frames we use are so constructed that the bees will not build comb between or over them at the top, nor fasten the section case and frames together, as is the case when the common top bar is used.

Nailing Block for Frames.

No one can do good work at nailing frames without a proper board to nail them on. We can send one, by express, that will do the work nicely price,..... .50

Comb Foundation.

We can supply the best brands at manufacturers' prices, and ship direct to our customers from the nearest factory. We also keep a quantity in stock to fill small orders.

1 to 10 lbs., for brood frames.....55 cts. per lb.
1 " " " " sections.....60 " " "

We keep in stock but one dimension of brood-foundation 17½ x 7 inches. This is large enough for any L. frame and is just right for the Bay State frame.

Perforated Zinc.

This we can supply in any quantities, shipped with other goods, per foot.....12 cts.

If sent by mail, add 10 cents per foot for postage.

Bee Veils.

The veil has a rubber band which draws the top together; it is then placed over any hat and drawn until the elastic is over the hat band. Common net, by mail,..... .35

Smokers.

Bingham & Hetherington's.

By mail, $1.75; by express,.....$1.50

Queens and Full Colonies.

Prices of queens.

Untested queens, each,	$1 00
Selected " "	1.25
Tested " "	1.50
Extra breeding queens, the best we have, each,	3.00

Our untested queens are sent out before any of their brood hatches. 95 per cent will prove to be purely mated. Safe arrival and purity guaranteed in all cases.

Full Colonies.

We consider eight frames well filled with brood and covered with bees a full colony. Prices of such in B. S. hive, including one set of sections, $12.00. Purchasers to pay express charges. Safe arrival guaranteed.

Queen-rearing Apparatus.

Beekeepers who rear queens, whether by the Alley method or by any other, should have the apparatus here described. The SWARM BOX and QUEEN NURSERY are articles that no person who rears queens can dispense with.

By using the swarm box a large colony of bees can be confined a long time or transported safely hundreds of miles. It is a very useful article about the apiary at all times during the season.

Sent only by express, price, $1.25.

When a colony swarms and it is desirable to preserve the queen-cells, and no nuclei are at hand, the Queen-nursery in such cases will be found invaluable; the cells can be placed in the cages and they need no further care for a week or more. Virgin or fertile queens can be kept in the nursery for several weeks.

The following articles are also used in rearing queens, a full description of which can be found in our work upon queen-rearing.

	Express.	Mail.
Queen-nursery (of 21 cages).....	$1.25	$1.60
Swarm-box.....	1.25	
Fertilizing-hive (complete)	.50	
Fumigator for using tobacco..... ...	.25	.30
Cone-feeder.....	.15	.20

To make the lot complete, we put in each package one drone-and queen-trap, one copy of THIRTY YEARS AMONG THE BEES, and send all by express for..... $4.50

All these articles can be packed in the swarm-box and sent safely by express or freight.

Alley's Automatic Swarm-Hiver.

Easily applied to any style hive in use. Will catch and hive 99 per cent. of all swarms that issue. Can also be used as a trap for destroying useless drones.

An individual right to make and use the SELF-HIVER will be sold for $5. Sample Hiver mailed free to the purchaser.

We do not wish it understood that every one must purchase an individual right in order to get one of the self-hivers. We mail a sample to all who desire them, for $1.00. If, after that you need an individual right to make and use them, the one dollar may be deducted from the five dollars, the price of the right to manufacture.

Per half dozen, flat,		$5.00
Per fifty,	"	25.00
Per hundred,	"	40 00

Sample Self-Hiver by mail, $1 00.

Henry Alley, Wenham, Mass.

HOW TO REMIT MONEY.

Remit by registered letters, cashier's check or express orders. If sent by money orders or postal notes, have them made payable at the Salem, Mass., P. O. Make all remittances payable to the order of H. ALLEY, *Wenham, Mass.*

THE AMERICAN APICULTURIST.

A Journal Devoted to Practical Beekeeping.

VOL. IX. APRIL, 1891. No. 4.

SOME POINTS IN QUEEN-REARING.

The various branches of bee culture require for success in any of them an adaptability. And it seems to me that the many delicate operations required in the special pursuit of queen-rearing require a peculiar talent that few possess, and I have fully come to the conclusion that it is better for the person who makes honey production his specialty to leave the queen-rearing business in the hands of experts in that line, for if the breeder is conscientious in his work the race of bees he is breeding will become better and better. And if we are to have the coming bee it will come through such a breeder instead of through the one who rears queens in connection with his other pursuit of honey production.

It seems to me that the main point to be considered in the rearing of queens is, first, size. A virgin queen, when it first emerges from the cell, has either nobleness or inferiority stamped upon it, and no other than fine large queens should be tolerated. And the specialist in queen breeding, if he wishes to keep up his reputation, pays much attention to this point while others let many inferior queens live, with the remark "*I guess* she will do."

If every point is well up to the standard (and I wish there was a definite standard as there is in the various races of poultry) the queen, if the weather is favorable, will fly out on a fertilization trip in five days. There are instances where the queen has taken this flight in three days and also many instances under every beekeeper's observation where the fertilization has been delayed even in fair weather up to ten or more days. The latter queens, as a rule, are the inferior queens, while the earlier the flight, the higher the quality of the queen.

Another favorable point to notice is the colony that has drones flying earliest in the spring. A first thought might be that the successful wintering of the colony was the prime cause of early drones. But behind all we have the alert queen, and we would not except the queen even from the successful wintering, for a perfect queen will rear hardy children.

Another point of vital interest to the producer of honey is the prolificness of the queen. Up to the time when honey begins to come in rapidly the queen should have unlimited room for egg laying. The more bees the greater number of tongues to lick up the nectar; then with our modern plans, the whole force can be set to honey production.

In spite of what others may say, I want a queen of the highest prolificness.

Then I like to observe the point of longevity. A perfect queen will be as prolific the third year as the second, and even to the fourth year, and when a honey producer advocates the re-queening of all his colonies the second year, it seems to be an evidence of the inferiority of his system of queen-rearing and of his queens.

The drone question is still another vital point in the rearing of perfect

queens. Our books tell us that the rearing of drone brood in large quantities is very exhausting to the bees; then it is an evident fact that the introduction of comb foundation prevents this exhaustion and the few drones reared are better for this cutting down of numbers, and perhaps this is the reason why we are raising a better grade of queens.

The drone cannot be overlooked but is a prime factor in the rearing of perfect queens.

A queen reared with all of the above points in mind will duplicate herself every time, *i. e.*, her daughter will be a fac-simile of the parent as far as the human eye can see and no one but a specialist in queen-rearing can produce these highest results.

That we all may still progress in producing a higher grade of stock is the wish of the RAMBLER.

QUEENS AND THEIR RELATION TO QUIET AND GOOD-WINTERING BEES.

Nearly all beekeepers have noticed a seeming peculiarity in certain colonies of bees in remaining quiet in winter while other colonies are restless. The very quiet bees have invariably consumed the least honey and wintered the best and the packing about the hives in outdoor wintering does not get so damp as about the restless colonies. The loss in bees is also perceptibly less.

It may not be in the queen but it is certain that the peculiarity referred to is hereditary and may be bred into a strain of bees especially noted for good wintering qualities. I have noticed in my own apiary for years that the daughters of my best wintering queens wintered very much like the bees of the parent colony. I believe Mr. Alley places a great deal of stress upon this quiet trait in wintering of the bees of his famous breeding queen. And if I may judge of the very quiet wintering qualities of one of her daughters in my own apiary the trait is transmissible.

I consider this matter of so much importance that I shall not hereafter allow any drones to fly from any except the best wintering stocks, or breed from any that do not prove to be quiet in winter confinement.

New Phila., O. Dr. G. L. TINKER.

SOMETHING ABOUT QUEEN BEES.

This is a subject that is likely to interest a large number of the readers of the APICULTURIST. Previous to the year 1860 there were few beekeepers who had any extended knowledge of a queen bee. The old-fashioned beekeeper used to tell all sorts of stories about the "king bee;" yet the old box-hive beekeeper knew but little of the functions and nature of even the "king bee." They told us that this mysterious bee led off the swarm, yet they did not know that this "king bee" was the mother of the entire colony. Those beekeepers of ye olden times supposed that the "king bee" was the first one to leave the hive when a swarm issued.

Few beekeepers, previous to the above date, had as little general knowledge of the management of an apiary as they had of a queen bee; and at this late day if we go among the class of beekeepers who do not read the papers devoted to bee culture, they will still talk to you about the wonders of the "king bee."

After the introduction of the movable comb frame by Mr. Langstroth, it was an easy matter for those beekeepers who adopted the improved hives to study the habits and nature of the queen bee and her colony.

What is a colony of bees without a good queen? The queen, however, is not the leader or "boss" of the hive. She is the mother, and exercises no functions that should give her the distinction of leader or king. When a hive contains a good queen all is well within, but a queenless colony is almost worthless, unless another queen is introduced within a certain time, or the means supplied by which the bees can rear one.

On the other hand, what is a queen bee good for without a colony of bees to support her? A queen is as much dependent upon a colony for an existence as the bees are dependent upon the queen. The sole function of the queen is to lay eggs; when she has done this she has done all that nature requires of her. She has nothing to do with the nursing or developing of her offspring, yet the welfare of the colony is dependent upon her presence.

How many eggs will a prolific queen lay in twenty-four hours? is a question that is often asked. Some queens will not lay more than 300 eggs each twenty-four hours, and such a queen as that is as worthless as one that does not lay any eggs, and in most cases even more so.

A good queen will average to lay not far from 1200 eggs each twenty-four hours from April 1 to September 20. A queen that will do this, other things being favorable, is first-class and the owner of such can depend upon getting a large crop of honey from her colony, if there is any forage to be had.

Berlepsch had a queen that laid three thousand and twenty-one eggs in twenty-four hours, by actual count, and in twenty days laid fifty-seven thousand.

I have no doubt that our two hundred dollar queen did equally as well, if not better, in the season of 1890. We drew not less than sixty full L. frames of eggs from her hive between May 1 and August 20, and I know this queen has laid more than three thousand eggs in twenty-four hours.

Why should we prize this queen so highly if she is no better than an ordinary one? Why does 99 per cent of her queen progeny prove to be so valuable if she is not better than an ordinary queen? The fact is, this queen is even more valuable as a breeding queen than we have claimed.

Another point comes in here. I do not believe that the most prolific queens are, in all cases, the best ones. I have seen queens that would lay millions of eggs and keep their hives very full of bees; in fact, the queens were so prolific that all her colony could not get in the hive. The bees were very poor honey gatherers and on that account the queen was worthless. Such a queen is certainly *too* prolific. Professor Cook says, "the activity of the queen is governed largely by the activity of the workers." This is correct. In the spring when bees are gathering large quantities of pollen, brood-rearing is being carried on extensively. As the combs are filled with pollen and honey later in the season, brood-rearing is curtailed. The inexperienced beekeeper must not understand that brood rearing ceases in summer when little or no honey is being gathered. Such is not the fact. A colony having a good queen always has its combs well filled with brood during the warm months, and it matters not whether there is an abundance or a scarcity of forage. In the season of brood-rearing there is always plenty of brood in all stages of development in most hives unless there is something wrong with the queen.

DO QUEENS STING?

Do queens ever sting a person? We do not see how they can, though we have seen them try hard to do so. The sting of the queen is not straight like that of the worker. It is curving and is not easily thrust into the flesh. The sting of the queen seems to have been designed for the sole purpose of destroying a rival queen.

HOW QUEENS FIGHT.

When two queens are placed in a hive, or when there is more than one queen in a colony at the same time, there will be trouble; and it will happen just the moment the queens meet face to face. Queens do not go to battle by first having a war of words, as a good many men do, but when they meet they deliberately clinch and the one that has the advantage of position at the start comes off the victor; the other queen receives her death wound in the thorax, just under the wing, from the curved sting of her antagonist.

The wounded queen, in many cases, does not die immediately. She will be seen crawling on the combs, dragging one leg after her until finally she drops to the bottom of the hive and is ejected by the workers.

When two fertile or unfertile queens fight for control of the colony, the only advantage one queen has over the other is in position. Two fertile queens go to battle on equal footing, that is, if both were taken from hives where they had been laying eggs up to the time of their removal. But they would not be equally matched if one of them had been out of her colony twenty-four hours, as in that case the abdomen of the latter would be so reduced in size as to give her a decided advantage in the contest

While the queen just taken from her colony would be awkward and heavy, the one that had been removed twenty-four hours previous would be as nimble as a fly. Why, this nimble queen would step up and thrust her sting in the large queen as quick as a flash, and her deadly work is done.

When two virgin queens strike out to despatch each other, they are equally matched.

The one destroyed did not get the advantage of position, or may have missed a foothold or in some other way was unfortunate and in consequence lost her life.

TWO QUEENS IN A COLONY.

Usually but one queen is allowed in a colony at the same time, though there are cases where two queens have lived peacefully in a full colony for several weeks. We can vouch for this statement, as this singular occurrence has happened in the Bay State apiary. A nucleus colony having an unfertile queen was on a stand near a full colony. One day the nucleus was opened and the queen was missing, and as we supposed lost on the mating trip, or had on her return entered the full colony by mistake and was destroyed. Some days later the combs of the full colony were examined and the missing queen found as happy and contented as a queen could be. It was natural for the apiarist to think that under the circumstances the queen must have been destroyed by the bees whose colony she had entered on her return trip.

This was the first case in the Bay State apiary of two queens living in one hive and having full possession of the combs. It happened so many years ago we really have forgotten what disposition was made of the queens.

We did not think two *unfertile* queens would live peacefully in the same hive a very long time. We do know however, that a large number of young queens, as well as a good many fine cells have been destroyed when a little careless in recording the time of starting the cells. The first queen that hatches will destroy all cells, and sting the younger queens as they meet them.

Very young queens seem to know how to protect themselves from an attack by an older queen.

Instead of running over the combs in order to keep out of the way of the queen in pursuit, they just get into a cell and stay there till hunger drives them out. We have found on some occasions as many as a dozen queens tucked away in cells, and on opening the hive and disturbing the combs the queens would appear, and of course were placed in cages. As long as the queens kept in the cells they could not be harmed by an older and stronger queen.

LARGE AND SMALL QUEENS.

There is a great difference in the size of queens. Some are nearly twice as large as others. Which of these are the best? Well, we like and always select the largest queens for all purposes. The smallest queen ever used in the Bay State Apiary was purchased from Mr. Langstroth, and cost including express charges, some over twenty-two dollars. She was a fine queen and a large number of splendid queens were reared from her eggs, and were shipped to customers in all parts of the country.

Although small, this queen produced very fine, large young queens. It has always been our aim to rear large queens as they give much better satisfaction, even if they are no better in other respects than small ones.

OUR TWO-HUNDRED-DOLLAR QUEEN.

We have so many new subscribers that would like to know about this valuable Italian queen, the old story of her history will be repeated. It is worth repeating, as another queen the equal of this one cannot be found in the world. We ought to say of her as Bingham & Hetherington say of their celebrated smokers, "*best in the world.*" Well, we really think she is the best queen on the face of the globe.

She is a sort of come-by-chance. In the month of June, 1889, a lot of fine selected Italian queens were introduced to colonies in the Bay State Apiary. Later in the season one of the colonies seemed exceedingly full of bees; a good deal more so than any other hive in the apiary and the bees uncommonly active. This led us to an investigation of the interior of the hive to see what it all meant. The combs were found solid with brood, not a missing cell, and every bee a large and beautiful specimen of the golden Italian race, in fact, it would have been hard to find a more perfect colony of bees. The queen was found and she was an extra large one and of that rich, golden color that pleases the beekeeper when he receives such a queen by mail. Young bees were coming out of the cells by hundreds. Like all breeders of queens, we selected this one for a mother and in the course of a week a large number of cells were maturing from her eggs. In due time the young queens appeared; they were large, and in color exact duplicates of their mother. When the queens were fertilized they were mailed to our customers and the result and also what is said of them generally may be found in the testimonials given on another page, this issue of the API.

About twelve hundred queens were reared from this one mother in the season of 1890. Some sixty odd L. frames well filled with eggs were taken from her colony in one season for queen-rearing alone, yet her colony was even more crowded with bees than many others in the apiary. The workers of this colony are more active, and seem larger than the common strain of Italians. They fly and are at work when other bees dare not venture out, and gather honey when other bees do not.

Visitors to the Bay State Apiary have seen the frames removed from this hive and the queen exhibited without the use of one puff of smoke, and no one was ever stung in the operation. So the disposition of the bees is all that any one can ask for or even expect. Her colony has gone through two winters in perfect condition and is to-day the best colony in the apiary. The bees have remained perfectly quiet and there is no mould nor moisture about the hive or combs as there usually is of a colony that does not winter well. This queen has proved herself so much superior to any other that we considered her worth one hundred dollars. After testing her one year as a breeding queen and getting so many testimonials from those who had received queens reared from her eggs, her value has been raised one hundred per cent and now two hundred dollars cash cannot purchase this queen. Any experienced queen dealer will tell you how an extra breeding queen is appreciated as a mother bee. Every daughter reared from this queen is large, handsome and perfect. There is no culling, or rather there need be none, yet, when there are plenty of queens in the nurseries we do select the *best* from the *best*, and that is why the queens sent out from our apiary have gained such a high reputation.

Some people think that most any sort of a queen *is* a queen. They do not so pass at the Bay State queen-rearing apiaries. Every queen reared here must come up to the standard in size and activity, or they are not introduced to nucleus colonies to become

fertile. Our long experience in rearing queens has given us the "practised eye" to detect any imperfections that may exist in a queen the moment she leaves the cell. The quality of a queen is judged by the following points: 1. The cell must be large and pointed from which the queen came. 2. She must cut off a large cap when she leaves the cell. This last is one of the best indications that a queen is likely to prove a valuable one. 3. The queen should be large, plump, active, and of a light straw color. The above are the first tests of the quality of a young queen; but we are not done here. The queen to be up to the standard should be fertilized, if the weather is pleasant, inside of ten days after she leaves the cell, and begin to lay in the course of thirty-six hours thereafter. Now comes a test that should crown all the others. When the queen has filled one comb with eggs, examine the cells to see that every egg is put in the cells in nearly exactly the same position, that is, point downward and the eggs large and plump.

The above are all the important points required to test a queen bee until she has been introduced to a full colony. After that it will require about one year to test the wintering and honey gathering qualities of her colony.

RAMBLER'S OPINION OF OUR BEST QUEEN.

J. J. Martin, of Hartford, N. Y., better known in the role of author as "Rambler," visited the Bay State Apiary at the last of September, 1890, and of course was shown our famous hundred-dollar queen and her colony. Here is what he says about it:

"We were next shown the colony in which was installed the celebrated $100 queen. This colony had thrown off a swarm quite early, and during the season sixty frames of brood had been drawn from the parent colony alone for queen-rearing. But whatever prodigies the colony had done, we noticed that they were very active; and though it was during the last days of September, they were busy at work; and, allowing the Rambler to judge, it was the best colony in the Bay State Apiary."

This colony has always been in good condition. We will now drop this part of our subject and tell you something about the

GOLDEN CARNIOLAN BEES AND QUEENS

that were first originated in the Bay State Apiary. We have informed the readers of the API what an easy matter it is to breed up golden, or yellow Carniolan bees from the dark strains of this race. We now have in the Bay State queen-rearing apiaries several colonies of the beautiful golden Carniolans. These colonies proved to be superior in all respects to the dark or gray Carniolans; splendid workers and as gentle as bees can be; queens very prolific, workers large, active and always on the hunt in the fields for forage. Late last fall these bees seemed determined to secure sufficient stores for winter. Have seen them working in a rain storm. Cold weather only could keep them in the hive. The queens keep the combs solidly packed with brood all through the warm months. Up to date these colonies have wintered in the best condition and but few dead bees have been seen about the entrance of the hives; no mould or dampness, and bees very quiet. Although a large sum of money has been offered for some of these colnies, they were not sold, as they are to be used in our apiary the coming season for rearing queens. We shall run a queen-rearing yard for golden carniolans two miles from our home apiary, and can guarantee the purity of all such queens sent out by us.

Rambler was shown these bees when here, and special pains were taken by him to test their disposition. Listen to what he says of them:

"We expressed a desire to see the yellow Carniolans and were immediately shown a colony that would ordinarily pass for very good Italians. But these bees, when the hive was opened, showed all the traits of the dark Carniolans. No veil nor smoke was used. Quick motions near the comb or over the hive were not resented. As to honey-gathering qualities, we should think that eastern Massachusetts is not the locality to test them

for prodigious yields; but Brothers Alley and Pratt have great confidence in the superiority of this strain over all others.

Will say to Brother "Rambler" that Wenham is a much better place to test the working qualities of bees than he has an idea of. So far as we have been able to judge, more honey was taken in the Bay State apiary in the season of 1890 than in any other locality east of the Mississippi river. H. Alley.

NOTES ON QUEEN BEES.

By E. L. Pratt.

First-class queenbreeders rear their queens from the egg, according to nature. If you want large, prolific and long-lived queens, procure them from those who start them from eggs.

We are constantly making improvements in our ways and means of breeding, and can assure you that you will get none but first-class bees and queens from us. We spare no pains nor expense to produce stock that you can exhibit to your friends with pride.

There has been confusion over the word "beauty." A bee may be beautiful and not be highly colored. Color is not necessarily beauty. There are two classes of Italian bees; the beautiful and the bright. The bright Italians are not beautiful; they are shining, brassy, flashy yellow; while the beautiful Italians have the assemblage of graces that please the eye.

There are great advantages in having good bees:— bees that were born workers. Like human beings some work all the time while others shirk all they can.

Bees, from queens bred in a haphazard way, are generally of the latter class. In order to produce first-class queens in every respect, one must give his entire attention to it. He must also have experience in this particular branch of apiculture. Good queens cannot be obtained by the methods advocated by one-half the writers on bee matters.

We use a shipping cage having all the requirements. It is a little more expensive than the ordinary cage, but it possesses all the desirable points. It is an easy cage to handle, safe shipper, safe introducer and so simple that the novice can introduce queens with assurance of success. There is no need of coiling up bits of wire cloth, whittling plugs and the like. Simply follow the directions and your queen will be safely introduced without the least bother. All the leading breeders will use this cage as soon as they learn of its value. We could almost guarantee safe introduction when this cage is used. It never fails in shipping to customers.

Very few persons seem to understand the term "inbreeding." Inbred queens are those that are mated to the drones of a certain stock, generation after generation, or *vice versa*. Where brother and sister or daughter and father are constantly brought together in fornication it is considered rank inbreeding.

It is in this manner that high colors are fixed. For instance: here is a laying queen, No. 1. She begets Q^2 and D^2; they mate and Q^3 and D^3 are begot and mated, and so on and on.

Or if D^2 or D^3 are used constantly in mating with the queens from Q^1 the result is inbred stock. To mate in occasionally will do no harm, but to follow up the practice will ruin the bees.

Cases of inbred stock have been known where the drones were born white eyed and stone blind.

If you want good stock there is a way of getting it and keeping it after it is obtained. Send to two reliable breeders and obtain from each, one or more *good* queens and introduce them to your colonies. Select from the ones purchased giving the best results in honey gathering, temper, wintering, etc., and set them apart as your "best stocks."

At swarming time adjust traps to all other colonies and allow no drones to fly but those from the "select colonies."

Better results will be obtained by shutting off all drones but the yellowest from one of the colonies selected.

One of the other best colonies (not akin to the drone stock) can be used for queens. To obtain some good cells from them they may be forced to swarm by the crowding plan. Save all the good cells and proceed to supersede the inferior queens by taking them away and inserting the cells obtained by forcing. Continue in this manner until all have fine young queens from select stock. The brand of zinc to use in the traps should be of the size that will exclude drones and yet large enough to allow a queen to pass. If plenty of drone comb is given to the drone-rearing colony, there will be plenty of select males in the air when the select virgins fly out to mate, and the result will be a decided cross between the two best stocks in the yard. Be sure to keep a record so as not to have any in-breeding and if this practice is followed up the bees will be kept pure and good.

We warrant that the results in honey will be very noticeable from season to season.

FORCING INCREASE.

A simple and safe method for forming new colonies is to go to a strong stock and take from it two frames of capped brood and place them, bees and all, in a new hive. From another colony fully as strong, borrow two frames of hatching brood and place one on each side of those in the new hive. In both cases be careful not to take the old queen.

Move one of the strong colonies to a new stand and set the new hive in its place.

Should more bees leave the colony that was moved than enough to cover the four combs in the new hive, their positions should be reversed until the desired force is in each hive.

At the end of the third day introduce a young laying queen by the above method.

Empty combs or full sheets of foundation should be placed at the side of those occupied as soon as the colonies become strong. The spaces left in the hives from which the brood was taken can be filled in the same manner.

Never attempt to force increase unless honey is coming in freely. A comb of honey should be given to the forced colony if the flow should happen to shut down.

EDITORIAL QUEEN-BEE ITEMS.

Imported queens are very dark and their progeny resemble American hybrid Italians.

So far as our experience goes in importing queens, we are free to say that our foreign friends do not thoroughly understand the art of rearing them.

The best queen bees produced are reared by American beekeepers. They excel in points of color, size and purity, as well as in honey-gathering qualities. Is this saying too much for us?

A queen bee is very tenacious of life. We have sometimes injured the head, or other parts of their bodies and have seen the queen turn over and apparently dead, but in a few moments they would revive and come up as lively as ever.

The clipping of the wings of a queen is cruel, unnecessary and not of the least advantage to the apiarist. In fact, it is a decided disadvantage and for more reasons than one. These reasons have been given in the API several times, and we will not repeat them here.

Never handle queens with the hands or fingers, especially a queen that has come out with a swarm. If one is perspiring freely, the moist hands will give the queen an unnatural odor, and her colony will disown her. Queens meddled with under such circumstances (swarming time) are almost sure to be destroyed. Use a dry stick, or anything to aid the queen if she cannot help herself by reason of defective wings.

A good queen, when in the act of depositing her eggs, always has her head pointing towards the bottom of the hive, while an inferior one, when she lays, is seldom found in that position. This accounts for the fact that while the eggs of the former are all laid in one posi-

tion (perpendicular), those of the latter are deposited in all ways.

Then, again, a good queen rarely, if ever, skips a cell; the inferior queen will "jump" a good many. It seems to us that even the novice can judge of the quality of a queen, if these simple rules are observed.

When a queen commences to lay, she deposits a few eggs on one side of the comb and then goes to the other side and lays in those cells exactly opposite. This she continues to do till the entire comb is filled.

But few of the thousands of those who keep bees ever heard a queen "pipe." The fact that the piping is heard but once a year, and that just before a second swarm issues, is why so few beekeepers have experienced anything of the kind. By placing the ear to the side of the hive on the evening of the seventh day, or on the morning of the eighth day after the first swarm issued, the piping of the young queens may be distinctly heard. The piping is made with the rapid vibration of the wings before the queens leave the cells and, curiously enough, no two queens give the same tones. While one queen pipes on a high key, another does so in a low, base tone, and still another appears to be located a long distance away.

The reason why the piping is done is not exactly or clearly understood. When the piping commences, the caps of the cells are cut nearly off and the young queens are ready to emerge therefrom. The piping seems to indicate that the unhatched queens are ready to lead off the second swarm, or it may be made by one queen in order to ascertain whether there are other aspirants to the throne of the colony.

FAILED TO WINTER.

MR. ALLEY:—Please send me one of your nice queens as I have a queenless colony. The queens I got of you last year carried their colonies through the winter all right. Those purchased from other parties failed to winter their colonies.

Little Rest, N. Y. WM. H. TOMPKINS.

CLIPPINGS FROM E. L. PRATT'S PAPERS.

WE WANT BETTER QUEENS, NOT CHEAPER

Any beekeeper of experience knows first that the ordinary honey-producer cannot produce as good queens as can the special breeder; second, that he cannot raise queens (good or poor) as cheaply as he can purchase them; and third, that no one, queen-breeder or not, can produce *A No. 1* queens, tested for strength and prolificness, as well as purity, for less than three dollars each. Now, such being the admitted fact, does it not savor of "a trick of the trade," if nothing worse, for any one to advertise queens at less than the above figure. It is true that queens can be reared promiscuously at a profit, at one dollar each, but who is there of us who wishes to run any chance whatever of deteriorating the stock we now have?

If any one thinks a bee is a bee and nothing else, and that one bee is just as good as another, that one will not probably see the point of this article; but the apiarist who desires constant improvement in his bees, as he does in his cattle or horses, can fully appreciate my idea, which is this: it requires care and skill to improve bees as well as any other form of stock. It cannot be done without much care, and the exercise of great skill. Not only must the best queen mothers be used for the purpose, but equal, if not greater care must be given to the rearing of drone mothers also. We can select personally the queens from which we rear our queens and drones, but we cannot select individual drones to mate such queens, but must depend on their meeting such drones as are flying when the marital trip is made. Now, does any one suppose for a moment, taking all things into consideration in connection with breeding alone, that the price I have given is too high, and when there is added the great risk to queens, in making their wedding flight, can any one think for a moment that my figures are high enough? If they do, let them "try it on," and my word for it, they will

at once admit that I am not too high, to say the least. Admitting, then, that I am correct in the above, does it not follow that those who advertise queens at the ridiculously low prices that are given every month, either are not giving us such queens as we want or else are losing money in the business? I do not rear queens, have no friends that are in the business whom I desire to aid by this article. I do believe, however, that better queens are wanted, and that we can only improve our bees by using the best queens procurable; and with this belief I must advise all beekeepers to buy only from those dealers in queens who charge prices at which a profit can be made, as the risk in purchasing, from those who offer them at what is known to be losing prices, is too great for any of us to run, who desire improvement.

I assail no one; I impugn no one's honesty; I simply say what I know to be the truth, and common sense will show all that no one cares to breed queens at a loss any more than they care to do business of any kind without a profit. J. E. POND.

No. Attleboro, Mass.

What we want is good queens. We can get cheap queens any time and perhaps can get good cheap queens once in a while, but that is not the rule. In order to get good queens the same rule of breeding must be applied that we apply to any other class of animals, viz., breed from the best of specimens and continue to select with great care. *Pond.*

I am sorry to say that a majority of queen-breeders seem bent on bringing ruin on the queen-rearing business by advertising and selling queens at prices below what good queens can be reared for. When a man proposes to sell an article or commodity at prices below *cost value* and proposes to continue the business, it is positive evidence that he is sending out an inferior article. The thing that is needed most is better queens, and I am sure that beekeepers are willing to pay "living" prices for queens if they can only be assured that they will be fairly dealt with.—*G. W. Demaree.*

Do not crowd down the prices of queens. They are low enough. If there is to be any crowding done, let it be for quality, and a higher price naturally follows. There is nothing so cheap about an apiary as a cheap queen.

Two or three months' hard work in the scorching sun would convince all that we cannot afford to rear a queen for less than $1.50, and $2.00 is none too high, taking into consideration the risk all young queens are heir to.

I have felt, and still feel, that this cheap queen traffic tends to haste, not care, in breeding, and that with 'dollar queens' ruling in the market, there is lack of inducement for the careful, painstaking labor that is absolutely requisite to give us the best race of bees. . . I have feared that this 'cheap queen' traffic would crush the hard effort, requiring study, time, money and the most cautious experiment and observation necessary to give us a very superior race of bees. There is reason to hope now that it will, at most, only delay it. Enterprising apiarists see in this the greatest promise for improved apiculture and are already moving forward. Enterprising beekeepers will purchase and pay well for the bee of the future that gives such evidence of superior excellence. One thing is certain: 'dollar queens' are in the market, and are in demand; so whether the business tends to our good or evil, as rational men we must accept the situation and make the most of things as they exist. Let me urge, however, upon the progressive apiarist that there is no possible doubt but that the bees of the future will be immensely superior to those of to-day. Man can and will advance here as he has in breeding all other

stock. If the obstacles in the way are greater, because of the peculiar natural history of the bee, then the triumph, when it comes, will be greater, and the success more praiseworthy."

PROF. A. J. COOK.

POINTERS ON INTRODUCING QUEENS.

A queen of extra value, as an imported queen, deserves extra care in introducing. C. C. MILLER.

With my knife I cut into a frame of honey, get plenty on the thumb and first finger; open the cage and as the queen comes out grasp her with the hand containing the honey and with the knife put more of the same honey on the wings, legs and head; do not be afraid of it but get all you can on the wings, legs and head, then she cannot fly or run; drop her between the centre frames, close the hive at once; you can look again in twenty-four hours. I have introduced many queens in this way and cannot recall a case of losing a queen.

H. D. CUTTING.

The first plan I ever tried, and tried while in my novitiate, was the least successful. This was to cage the queen for from one to three days in the hive and then release her. Some colonies I could never get to accept a queen in that way. I regard it as the poorest method I know. Success by that plan is not impossible nor infrequent, but it is neither the safe way, judging by experience, nor the correct way on general principles.

How then shall we get the right conditions to introduce a queen? Allow the bees to do the introducing themselves. Let them release the imprisoned queen. There you have, in my opinion, the great secret of successful introduction. G. F. ROBBINS.

INTRODUCING NEW QUEENS.

An almost infallible method of introducing laying queens is as follows:— When the queen arrives, examine her cage and see that she and her attendants are in good health, also see that they have plenty of food in the cage. If all is well with the new arrivals place them over some strong colony to be cared for at least twenty-four hours. Proceed to the hive you wish the new queen to occupy (which must be one known to be in normal condition) and take away its queen. Leave these bees without a queen from forty-eight to seventy-two hours, when the shipping cage, containing your new queen, can be safely arranged so as to expose the food candy, and can be placed directly over the frames, or slipped down into the hive, in such a manner that the hive bees can remove the candy, and thus introduce the queen safely and with no trouble at all.

The secret of introducing a queen is absolute queenlessness and perfect quiet and harmony at the time the strange queen is released. These conditions are best brought about by the above process. E. L. PRATT.

HOW TO CARE FOR QUEENS SHIPPED BY MAIL.

Owing to the ignorance of the recipient and occasionally to the bad condition in which the bees and queens are when received, a good many are lost. We will try to lay down some simple rules that may be the means, if followed, of preserving the life of many valuable queens.

If the bees are in good condition when received, and the food not more than one-half consumed, the cage may be placed in any dry, warm and dark place. The queen may, in this way, be kept several days. On the other hand, if the bees are daubed as is sometimes the case, owing to damp or wet weather which occurs after the bees are mailed, the queen should be introduced immediately; or, if not convenient to do so at once, remove the bees from the cage and introduce about a dozen young bees that are not over two hours old. Those just hatched will do, but older bees are better. When this is done,

place the cage in a queenless colony; if none are in the apiary, place it in any hive where the bees can have access to the queen *through the wire.* It is not necessary to open a hive to place the cage in one of the brood-frames; put the cage on the frames, or on the honey-board, or in any place in the hive where the bees of the colony can see the queen. The food in the cage should be so protected that the bees outside cannot have access to it. The very best thing to do is to introduce the queen as soon as possible.

If there is a colony in the apiary that has been queenless more than three and not more than twenty days, it will be perfectly safe to put any of these bees in the cage with the queen.

We clip the following from "Stray Straws" in *Gleanings:*—

"Larger bees are advocated in the *Api*, in the belief that doubling the size of the bee will double the distance it will travel. Does a crow fly any further or faster than a blackbird?" C. C. MILLER.

Dr. Miller is getting funny again. Does the reader suppose that if we rear larger bees we do not increase all other functions in proportion to size? How foolish for any one to talk as does the Dr. What object could any one have in view in rearing larger bees but increased powers? Bless your soul, Dr., we want larger bees to fly farther, gather larger amounts of honey, and bees to do everything in proportion to their size. Suppose the crow has all its powers increased in proportion to size, when compared with the blackbird, what then? You seemed to have overlooked this part of it, didn't you, Dr.? We do not know that a crow will travel any faster than a blackbird, but most anybody ought to know, it seems to us, that a crow will carry twice as much corn out of a field as a blackbird. Why not compare a humming-bird to a crow? Which of the two has the larger carrying power?

Now if we can rear a strain of bees whose honey sacs are three times as large as that of the common race of bees, we have gained a point, haven't we, Dr.? We do not claim that this can be done by any method thus far advanced, yet it seems to us that a larger, and perhaps a much better bee can be produced. The proper way to begin is in rearing the queens. Increase the size of the queens and an increase in the size of the progeny will be the natural result. With larger bees, larger cells, etc. We don't know when Dr. Miller has been so hard pushed for argument as in this matter of raising larger bees. Try your hand at it once more, Dr.

EDITORIAL BUSINESS ITEMS.

In our next issue we shall give a full description, illustrated, of the plant of The W. T. Falconer Manufacturing Co., of Jamestown, N. Y. This firm do an immense business in beekeepers' supplies. We have nearly all our hives, drone-traps, etc., sawed at their factory. The workmanship and stock are not excelled by any dealers in the world. Their prices are the lowest, and the gentlemanly treatment all receive from the manager, D. E. Merrill, is worthy of special mention.

SUPERSEDE YOUR OLD QUEENS.

Don't allow any colony to go into winter quarters with an old queen. Such a queen will most likely fail early the next season. A colony which gives promise early in the spring of a good yield of honey will do nothing on account of the failure of the queen.

It will pay to requeen colonies each two years. Old queens are very poor property.

When a queen is three years old she has seen her best days and should be superseded. If you are a subscriber to our paper, send $2 for a daughter reared from our $100 queen. If you are not a subscriber, send $2.25 and get a queen and the API one year.

After May 1 the price of our work on rearing queens "Thirty Years Among

the Bees" will be advanced to one dollar per copy. Or the Api will be mailed one year and one copy of Thirty Years for one dollar and fifty cents.

Our advertising rates will be two dollars per inch. Special rates given on large ads. and those inserted for six months or one year.

This arrangement does not apply to any contract made previous to April 1, 1891.

We have also advanced the prices of Italian queens. After this date orders for queens will be accepted only at the following prices :—

For one to three queens, each $2.00
For six queens, each $1.75
By the dozen, each $1.50

Prices for golden Carniolan queens will be the same as for those reared from our TWO-HUNDRED-DOLLAR QUEEN. All queens will be tested and satisfaction guaranteed in every respect.

SPECIAL NOTICE TO CUSTOMERS.

We will say here and in as plain words as it is possible to do, that if any customer receives a queen that is not up to our guarantee and worth all you pay for her, just write us and state the case and what you desire, and the trouble will be made satisfactory at the earliest possible moment. You will find this a much pleasanter way to do business than it is to go among your friends branding us as a fraud. Several parties have taken the latter course of getting "square" with us. We really hope they got satisfaction and feel better for such an exhibition of contemptible meanness.

We also give notice here that if we have any unfilled orders left over from 1890, the parties will please notify us of the fact about May 20th, *not sooner*, and state the time they desire their queens sent. All such orders will receive early attention.

Our customers may depend upon having their orders filled as soon as possible after we receive them. No order will be held longer than it is actually necessary. A queen dealer is obliged to ship his queens as rapidly as possible in order to make room for the young queens that are coming on every day. Do not think the dealer is imposing upon you if you do not get your order filled by return of mail.

GIVING CREDIT.

We are willing to send out goods on credit to those whom we know. If you are unknown to us, and desire time, just get the postmaster in your town to say you are O. K., and the goods will be sent. As we have but a limited capital to work with, cash with the order is desirable.

WRITE YOUR ADDRESS PLAINLY.

We desire to impress upon our customers the importance of writing plainly. Much trouble has been experienced here in deciphering either the name of the writer, or the name of town or state. We do not have the time to spend in that business.

ABOUT REMITTING.

Directions for remitting will be found in each issue of the Api. Don't make money orders payable at the Wenham post office. Salem, Mass., P. O. is our nearest money-order office.

HOW TO INCREASE THE SUBSCRIPTION LIST OF THE APICULTURIST.

Is the reader of this aware of the fact that he can do us a great favor by sending one (if no more) new subscribers? We assure our friends that we will appreciate all such favors. Some day when you feel like talking bees, just take a few copies of the Api in your pocket and start out among your beekeeping friends and see what you can do. Get several subscribers and then tell us what we can send you by way of a premium for your trouble.

Will those who receive more than one copy of the Api hand the extra one to some beekeeping friend?

PRICE OF THE BAY STATE HIVE.

After March 10 the prices of this hive will be as follows :

One or more hives complete $3.00.
In the flat, by the half dozen, each $2.50.
Prices of the drone-and-queen traps will

also be advanced to the regular rates, viz.: per half dozen, $2.00; per dozen, $3 50.

We are now getting a large number of orders for these goods and desire to get over the most of this class of trade before our queen-rearing business begins.

We shall import light Carniolan queens to breed from this season and shall do our best to keep the stock up to its present high standard and surpass it if possible.

It is acknowledged by many that the APICULTURIST is one of the best advertising mediums for those who deal in beekeepers' supplies. The fact that our paper circulates largely, yes, almost wholly, in the western states, offers the best inducement to western supply dealers as an advertising medium. Try an AD. in the API and satisfy yourself that all we claim is true. We deal some in supplies, but those who advertise in the API get nearly all the western trade. We do not get much of it.

RAMBLER'S VISIT TO WENHAM.

Right here we will say a full description of the "Rambler's" visit, *illustrated*, will be found in the May issue of the API. It is a funny as well as a most interesting article. All who wish to get a good view of the Bay State Queen-rearing apiaries and of the proprietor should read what Brother "Rambler" has to say.

THIRTY YEARS AMONG THE BEES.

Below is given A. I. Root's opinion of this book:

"This is the title of a new book, written by Henry Alley, of Wenham, Mass. It contains 80 large pages, and is full of good things. In fact, we are ashamed to say we did not even know that friend Alley had got his queen-rearing down to such perfection, for this is what the new book deals with principally.

Toward the end of the book there are a great many good things; for instance, how to find a fertile queen; how to warm a small bee room economically; best fuel for smokers, and several other items that smack pretty strongly of long experience."

NOT A DEAD BEE.

Dr. Tinker writes under date of March 9, as follows: "Bees have wintered the best for years. Lost none. The colony having your queen has not lost a bee that I can see. They seemed to hibernate a good part of the winter. Their condition is first-class." We have a good many colonies, having these queens and no dead bees have been seen about their hives this winter.

If any subscriber desires to examine one of our improved Drone-and-queen Controllers, we will mail it for thirty-five cents, or, the API and Controller for $1.10.

The API and one of our improved Self-hivers will be mailed for $1.50.

OUR ONE-HUNDRED-DOLLAR QUEEN.

Bear in mind that each subscriber to the APICULTURIST is entitled to one of the best queens reared from our one-hundred-dollar queen, by remitting seventy-five cents when the queen is wanted.

PRICES OF QUEENS TO SUBSCRIBERS OF THE APICULTURIST.

We beg to remind all subscribers to the API that they can get one of our best *select Italian queens* by remitting seventy-five cents at the time the queen is wanted. After May 1, 1891, API and queen will be $2.00.

If any subscriber prefers one of our *select golden Carniolan queens*, the same as we charge $2 for, one will be sent for $1 75, or, two queens and the API will be sent for $3 50. The queens may be ordered and paid for when wanted. No queens will be mailed before May 20, 1891.

THE NICEST QUEEN.

FRIEND ALLEY:—Two years ago you sent me the nicest Italian queen I ever saw. The colony gathered lots of honey and is now the best colony in my apiary.

Selma, Texas. L. STACHELHAUSEN.

APICULTURIST MAIL BOX.

TWO GOOD PAPERS.

MR. HENRY ALLEY:—Herewith find amount for API 1891 I am a comb-honey producer, the API and the *American Bee Journal* having been my helping hand in bee culture for more than three seasons. They are always full of practical ideas.

Elgin, Ill. FRANK BLACKA.

BEES DID WELL.

New Denmark, C. B., Ca.

HENRY ALLEY ESQ.:—The four queens and four pound bees I got of you last June came in splendid condition. The queens are the handsomest I ever saw; the worker bees reared from them are all 3-banded, very industrious and gentle, good natured and easy to handle.

EDWARD ABELDGAARD.

MORE PRACTICAL THAN ANY OTHER.

MR. HENRY ALLEY:—Enclosed find amount for API, 1892. I must have the APICULTURIST. I look upon it as more practical than any other, though we have several other good bee journals.

Glen Rock, Neb. C. L. COOK.

THE BEST FROM THE BAY STATE APIARY.

MR. HENRY ALLEY: DEAR SIR:—I have been trying for the nicest colored queens that can be found. I have tried several dealers *and the best I have seen came from your apiary.*

Marshfield, Mo. M. L. MCNABB.

FROM THE GULF TO THE LAKES.

MR. ALLEY:—Your Beekeepers' Directory is a treasure. I have had queens from dealers from the Gulf to the Lakes, but the best I ever had are of your rearing.

Sylvan Beach, N. Y. P. W. LEETE.

A SPLENDID QUEEN.

MR. H. ALLEY:—Herewith find seventy-five cents, for another queen; the one you sent me last year is a splendid queen. Have taken thus far this season 112 pounds of honey from her colony and expect to get twenty-eight pounds more if the weather does not continue too dry.

Newburgh, Indiana. DR. GEO. LACKE.

NOTE THE RESULT.

HENRY ALLEY:—Have received sample copy of the API and examined the same with the following result: Enclosed find P. O. note for $1.25 for subscription, Thirty Years Among The Bees and Directory.—

Nevada, Ohio. J. N. MCCONNELL.

LIKES THE HIVE AND QUEEN.

MR H. ALLEY:—I purchased one of your Bay State Hives and like it so well that I have ordered half a dozen more.

The premium queen you sent me in 1890 was a very fine one. Her workers are the finest I have ever seen.

New York, N. Y. J. EDWARD GILES.

THE API PREFERRED.

MR. HENRY ALLEY:— After looking over several bee papers, I concluded to give the APICULTURIST the preference, and enclose 75 cents to pay for the same for one year.

Tremont, Ill. PETER SOMER.

FROM AN EX-EDITOR.

FRIEND ALLEY:—There are four journals that I cannot do without, and the API is one of them.

Romney, Ont., Ca. J. F. HOLTERMAN.

SHE IS A GOOD SPECIMEN.

FRIEND ALLEY:—Late last fall I got one of your queens from your hundred dollar queen. She is the finest queen I ever saw, although I have in my yard queens from several other breeders. She came too late in the season to show what her bees might be. She was successfully introduced and tucked up warm for winter. On the first day of February I opened the hive, and you can judge of my surprise when I found brood in all stages and quite a lot of downy little fellows running around, showing that the queen had been laying all through January.

I shall want some more of your queens if this one is a specimen of what you send out.

Glenwood, Oregon. A. A. MORRILL.

THE BEST STRAIN OF ITALIANS IN THE WORLD.

HENRY ALLEY:—I received of you the finest Italian queen I ever saw, and I have received queens from the principal dealers in this country. I gave you one dollar for her, and think I sold queens from her four years. I sold many queens to parties who import queens, and they all said my queens produced the finest queens they ever saw. I still have some of the stock of the original queen.

I believe you have the best strain of Italians bees in the United States. When I am asked "where can I get the very best Italian queens," I always answer, of Henry Alley, Wenham, Mass. The above are facts, not taffy.

Alexandria, Nebraska. CHAS. HARROLD.

QUEENS DID WELL; NICE BEES.

MR. ALLEY:— Please send me another queen. Both the queens you sent me in 1889 have done well and proved fine. They are the nicest bees I have.

Jewett, Ohio. DAVID LUCAS.

WORTH MANY TIMES THEIR COST.

BROTHER ALLEY:—Find $1.50 for API and queen. The three queens you have sent me the last two years are all O. K. and worth many times their cost.

Scales Mound, Ill. J. W. WILCOX.

HE LIKES THE QUEENS.

MR. ALLEY:—Send me eight queens, four from your imported mother. I like your queens better than those bought of other dealers.

Oran, N. Y. WM. H. BALCH.

FOUR QUEENS PAID FOR ALL.

MR. ALLEY:—I bought eighteen queens of you and lost all but four. But the four queens made up my loss to a great extent, as their bees were all I could desire or expect.

Bicknell, Ind. H. F. WINTERS.

HANDSOME BEES.

MR. ALLEY:—Find $1.50 for which mail me another queen. The bees are hatching from the first one you sent me and they are the handsomest bees I have.

Thorndale, Texas. O. J. E. URBAN.

HIVED THREE SWARMS.

HENRY ALLEY:—I hived three swarms this season with your automatic Swarm-hiver. I am away from home all day and found the swarms self-hived when I returned at night.

Revere, Mass. FRANK H PRESCOTT.

WORK WHEN OTHER BEES DO NOT.

H. ALLEY:—The queen I got of you in 1890 from your hundred dollar queen is a beauty; her bees work when others will not, and my others are a fine strain of Italians.

Anderson, Indiana. JAMES A. MINNICK.

THE API JUST SPLENDID.

FRIEND ALLEY:—I wish I could send you one hundred subscribers for the API as I think your paper is just splendid. Enclosed find seventy-five cents for another subscriber.

St. Charles, Ill. CHAS. H. ROBBINS.

TOO SCIENTIFIC FOR HIM.

MR. ALLEY:—Please send queen and "Thirty Years among the Bees." I have ——— on queen rearing. It is too scientific for me.

Payson, Ill. DANIEL E. ROBBINS.

MANY POINTS FROM THE API.

MR. ALLEY:—I get many points from the API that are valuable to me. Although three other bee-papers visit me regularly, I find your journal of more practical value than all the rest.

Unionville, Mo. E. F. QUIGLEY.

ONLY ONE POOR QUEEN.

MR ALLEY: Herewith find cash for half-dozen queens from your $100 queen. We have had a good many queens from your apiary and but one inferior one.

San Buena, Cal L. MERCER & CO.

THE BEST QUEEN HE EVER HAD.

EDITOR API: I have a queen I got of you two years ago that I consider the best queen I ever had.

Springville, N. Y. L. F. BROWN.

ONE WHO APPRECIATES THE API.

MR. ALLEY: [Your paper is superb. Enclosed is seventy-five cents for one year's subscription.

Miami, Mo. MRS. J. M. NULL.

HANDSOME IS THAT HANDSOME DOES.

MR. ALLEY: I had a queen from you and an Alley queen from Row of Greensburg and the bees proved so very gentle, especially the progeny of the queen I had of you (no taffy) that I shall introduce all Alley queens the coming summer. I never received a sting from the bees in the Alley colony last season, and the queen filled a 10-frame Simplicity hive (the only one I have—my banner colony) with bees and they gave me the largest surplus by large odds notwithstanding it was a very poor season. They always worked when other colonies were idle. J. B. ENOS.

Connellsville, Pa

WE WANT 100 COLONIES OF BEES.

We are ready to pay cash or exchange queens or goods in which we deal for bees. Now if any of the small beekeepers desire to send us three or four colonies in exchange for supplies just say the word and we will arrange the matter. Write us at once and say how many you can spare and what you desire in exchange for them.

H. ALLEY, Wenham, Mass.

THE AMERICAN

APICULTURIST.

A Journal Devoted to Practical Beekeeping.

VOL. IX. MAY, 1891. No. 5.

DEVELOPMENT OF QUEENS.

Before the convention of German and Austrian beekeepers held in October, 1890, at Graz (Austria), Mr. W. Vogel read an essay on this subject.

I will mention and criticise some of the points, which will no doubt interest the readers of the API.

Vogel says: Bees *never* build queen cells over a cell containing an egg. If a colony receives a comb with eggs only and no other brood, these eggs are always removed by the bees during the excitement caused by queenlessness. The latter part is in accordance with my experience, and friend Alley mentions this removing of eggs in his book and gives the remedy for it. The question is now, if we understand, to keep the bees from removing the eggs. Will they build queen-cells over these eggs or will they wait till the larva is out of the egg? I am not sure about it. In rearing queens I always used eggs just three days old or very young larvæ and now I prefer the latter one.

This removing of eggs brought up the idea that the bees eat them. Can any one prove this? I do not believe it.

I sometimes doubt whether a queen ever lays an egg in a queen-cell, and it is believed that the worker bees transfer these eggs into the cell-cups. This is a mistake. It was more than once observed by able apiarists, that a queen laid an egg in a queen-cup, and all the facts reported as yet, which seem to prove that eggs were removed, can be explained by fertile workers or in some other way. I had observed many cases when queen-cells were started on combs, which surely contained not a single egg before; but by continued observation I found always that these capped cells contained a dead drone.

The sexual organs of the queen commence to develop not before the sixth day of the larval-state, but they are fully developed in the nymph-state. We see by this that in exceptional cases the bees can raise a queen from a larva a little more than five days old. We believe that a larva four and one-half days old, observed by Doolittle, was the oldest ever used for a queen, but Mr. Vogel says that he many times has tried the matter.

Further we hear that the bees always select a larva about three days old from which to raise queens, if larvæ of every age are in the hive.

Vogel says, that the size of the cell has no influence at all to the size of the queen raised in it, so that from a small cell a strong queen can issue. Every queen-cell, even the smallest, is large enough for the largest queen. The cause of small queens is either too little food or too low a temperature. Even from a larva nearly six days old a normal sized queen can be reared in a very small queen cell.

If we take into consideration the size of the queens only, Mr Vogel may be correct in some cases. But so far as my experience goes, I found out that a small and very smooth cell always contained a small queen. It is true, if this queen is fertilized and laying eggs we do not see very much difference; but

all these queens, especially those from old larvæ were very short-lived. It is, of course, not the small cell which causes the small queen, but these small and weak colonies sometimes used for queen rearing build these small and smooth cells and just in these colonies we have not sufficient royal-jelly nor is the temperature high enough to raise good queens.

In this respect it seems worthy of consideration, as Dr. Dzierzon said, that the kind of honey and pollen used by the bees for royal-jelly is an important factor to raise good queens. We know by practical experience that feeding a colony, which is raising queen-cells has some good effect, merely by forcing the bees to some excitement and so cause a higher temperature. It will be of more importance, that the bees have fresh and healthy pollen in easy reach and in abundance. Probably some artificial food of albuminous matter, for instance eggs mixed with honey, would be of some value to raise larger and better queens.

Some other points I leave to discuss at other times.

L. STACHELHAUSEN.

Selma, Texas.

W. Vogel is wrong in his statement that bees will remove an egg from a cell-cup or that the bees will not build a cell-cap around an egg. Bees that swarm naturally always build a cell-cap around an egg, and in all cases rear queens from the egg. If eggs alone are given to bees just made queenless, a majority of the eggs will be destroyed. Queens reared in our apiary are obliged to start the cell from an egg.—ED.]

TO DR. C. C. MILLER.

"Larger bees are advocated in the API in the belief, that doubling the size of the bee, will double the distance it will travel. Does a crow fly any further or faster than a blackbird." *C. C. Miller.*

The Doctor seems not to "*Katch on*" to my drift. I really was not driving to Nasby's idea of crossing the Italian queen bee with the Plymouth Rock rooster, expecting to get the coming hen, to lay 3000 or more eggs per day. I might as fairly retort on the Doctor by quoting from him on page 59, April API, viz: "A queen of *extra value* as an *imported* queen, etc.," as though the act of importing, improved a queen any: if so send her back, and give her another sea voyage, repeat the dose, until we get the queen of the future. If I were breeding crows I would try by careful selection of *both* parents, careful attention to their physical wants, etc., to produce *young crows* (not *bumble bees*), that could when necessary fly farther, faster and with longer *enduring power* than their *parents* (*crows*) who were bred in a haphazard manner; should not expect them to fly faster than a flash of the morning light, or even a "blackbird!" Further, I do believe that by care and skill in selecting our queens and close attention to the conditions necessary for the reproduction of young, such as plentiful feeding, and new brood combs *made by the bees*, and *renewed each year*, oftener if I could, we shall approach the time, when all the drones will be in prime physical condition to mate our young queens, and that by following this method we may look for a larger *worker* bee in the near future. The fact that the present Italian bee travels *farther* and faster and gathers more honey than the common small black bee, and that their size is what enables them to do so, demonstrates that this *is* the road to follow.

Double the size of the worker bee, if we can increase their size by only a trifle, and that trifle, on the *end* of his proboscis; then the red clover is at our command and that means all over New England, more than double our honey crop.

I have attempted in my crude way to draw attention to the *want* of a larger, stronger, faster-flying worker bee, one possessed of greater endurance, able to go farther in the hunt for honey, with a longer proboscis, etc., and have given my method of getting at it. Will the Dr. Millers of the queen-breeding fraternity, who know more of the ins and outs of bee breeding than I ever expect to know, favor the readers of the API, with essays upon the subject of "how to produce a larger *worker* bee," and following the matter further than simply buying a large queen bee, tell us how best to treat her. I have noticed that

some queen breeders advertise old brood frames comb for sale at ten cents each (Mr. Heddon I believe) why is it they have these surplus combs on hand? Do they take that way of renewing the combs in the brood-chamber often and disposing of the old ones? Does Doctor Miller do the same, and is he afraid that his market for old brood combs may be upset if the readers of the Api get posted? CALVIN W. SMITH.

Wellesley Hills, Mass.

THE BAY STATE HIVE.

Perusal of the March number of the Api, just in, suggested a question perhaps at some time thought of by other readers, in regard to the Bay State Hive, which to say the least has novel features. After I had that pleasant call in Wenham at the Bay State Apiary and remarked then, and later in travelling westward, how much the temperature was modified there by the sea air, I wondered how successfully air space protects a colony when mercury goes from 5° to 20° lower than by the sea. Reports from experimenters in all locations only can decide. If air space is protection from 15°, 20° and lower, all hail the innovation, though it may add to the summer litter of the storehouse. Apiary work is called light because the fixtures in general are not bulky, but the unit of weight after a day's lifting among bees, in one mass, would call for the arm of a Milo. A day's work with a $\frac{3}{8}$ inch hive might not be so astounding, we will all welcome it if it can endure securely the sharp fingers of winter, cold and intense as recently in Vermont.

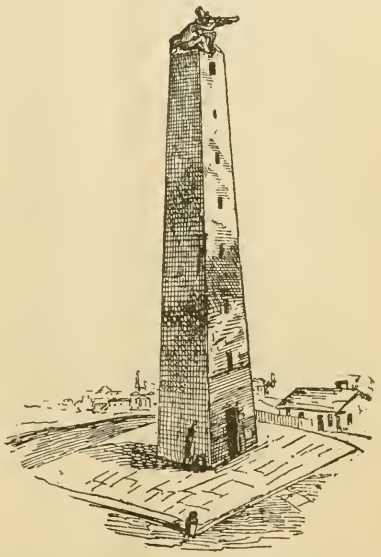
The March Api, as always, was appreciated for its brief and direct bee-wisdom. We think we shall have to introduce a little blood this summer from that renowned queen of yours, the "mother of nations." F. H. DEWEY.

Westfield, Mass.

The Bay State Hive will winter bees in any climate. We have had a hard winter here in New England and the wintering qualities of the Bay State Hive have had a thorough test. I have visited a number of out apiaries where the Bay State hive is used and there is not a dead colony. You know we use no packing about the brood-chamber.—ED.]

RAMBLER'S VISIT TO THE BAY STATE APIARY.

We reluctantly bade our Rhode Island friends good-by, and sped on our way toward the Bay State Apiary. Our route conducted us through the city of Boston, and here our patriotic blood became so stirred up that we lost our reckoning. But Boston people have erected a massive stone tower on Bunker Hill, where the traveler can climb up 294 steps and get a wide view. This view enabled us to get our reckoning again in a manner highly satisfactory. We immediately ran down stairs and followed our reckoning and were safely landed in Wenham, about 11 o'clock. A street-car was standing near, and an inquiry



BUNKER HILL MONUMENT; THE RAMBLER GETTING HIS EYE ON HENRY ALLEY.

elicited the information that Mr. Alley lived half a mile from the depot. We journeyed by street-car until the conductor pointed out the residence of our friend, and we were soon exchanging our identity with Bro. Alley. Our identity seemed to be satisfactory, and we were invited to rest a while in his den, and we gratefully accepted a rocking-chair. We found Bro. A. just giving

the finishing touches to the October issue of the *Apiculturist*, and his letters and MSS. were in a rather promiscuous heap upon the table. We also noticed a large pile of "Thirty Years Among the Bees," ready to mail, besides quite a number of *Apiculturists*. There were also several crates of fine comb honey and cans of extracted honey which had just been brought from a local fair which Mr. A. had just been attending. Both quantity and quality showed that Eastern Massachusetts had enjoyed a good honey-yield.

A call to dinner transferred our talk to the dining-room. While engaged in doing justice to Bay State substantials, who should come to share them with us but Bro. Pratt, of Beverly, Mass. After dinner we all felt remarkably well and good-natured, and we adjourned to the bee-yard. Bro. A. had just put up his last shipment of queens; and as they

LAST SHIPMENT OF QUEENS FROM THE BAY STATE APIARY, SEPT., 1890.

were piled up nicely on the cover of a Bay State hive we brought our camera to bear upon them, Bro. A., and the queen-rearing portion of the Bay State apiary. He was manipulating a Bay State hive and we caught a very good view. Forty full colonies were in the home yard, besides over two hundred queen-rearing hives. The little hives and tin feeders were scattered promiscuously, with entrances toward all points of the compass.

We expressed a desire to see the yellow Carniolans, and were immediately shown a colony that would ordinarily pass for very good Italians. But these bees, when the hive was opened, showed all the traits of the dark Carniolans. No veil nor smoke was used. Quick motions near the comb or over the hives were not resented. As to honey gathering qualities, we should think that Eastern Massachusetts is not the locality to test them for prodigious yields; but Bros. Alley and Pratt both have great confidence in the superiority of this strain over all others.

We were next shown the colony in which was installed the celebrated $100 queen. This colony had thrown off a swarm quite early, and during the season sixty frames of brood had been drawn from the parent colony alone for queen-rearing. But whatever prodigies the colony had done, we noticed that they were very active; and though it was during the last days of September, they were busy at work; and, allowing the Rambler to judge, it was the best colony in the Bay State apiary.

HOW ALLEY INTRODUCES A FERTILE QUEEN WITHOUT CAGING.

While talking about introducing queens, Bro. A. said he would show us how to do it. Taking a fine large fertile queen from a nucleus he stepped to a full colony, removed the cover, and dropped her, in an unceremonious manner, among the bees. We watched her a few moments. The bees were friendly, and she marched straight down between the combs, the reigning majesty. The colony had been queenless three days, and it was *just the proper time* to introduce her. Much earlier or much later than seventy two hours would have resulted differently.

HOW TO INTRODUCE A VIRGIN.

We will now go with Bro. A. and introduce a virgin queen to a nucleus. The tobacco smoker is lighted, and the caged queen, perhaps just from the nur-

sery, is taken to the queenless nucleus. A green plantain leaf is inserted in the entrance, the cover removed, and a couple of whiffs of tobacco smoke, and another as the queen is dropped, and the cover is replaced. We thought that was doing things quite rapidly, and removed the cover to look a little longer. Bro. A. says, "wait a few minutes, and we will examine them again. He keeps a record of the condition of the nucleus, with a shoetack system. The Rambler will not undertake to describe the various positions, slants, and angles, and what they mean.

About this time we returned to the nucleus, and found every bee in the bottom of the nucleus in a stupefied condition; and when their senses returned, the virgin queen was accepted. The plantain leaf soon wilted, and the bees could pass to their work. It struck the Rambler all of a sudden that these 200 nuclei, so well stocked with bees, would make several good colonies, and we asked what was to be done with them.

"Oh!" said he, "some frosty morning I will brush the bees off into the grass. It doesn't pay to unite and feed up. The bees usually die during the winter, and they might as well die now, and save all of the bother. I purchase bees in the spring to supply the waste."

The little combs are packed away in barrels, and securely headed up to keep mice away from them.

The full colonies were wintered outdoors in double-walled Bay State hives. We now and then found a drone-trap kicking around in the grass. In fact, we should judge that the grass had got a little the start of Bro. Alley while raising his 1200 queens and editing the *Ati*. His apiary was, however, about as tidy as the average run of bee-yards where there is much work done. We have noticed that these gilt-edged apiaries are the ones that do not bring in a large amount of surplus cash.

While in the Bay State apiary we did not talk so fast or get so absorbed as to fail to notice a very pleasant feature in the apiary. Two wee bits of granddaughters were upon his lap or following his steps when at a safe distance from the bees. They were indulged with sauce-plates, and spoons and honey; and while we were talking bees, the honey was distributed in various direc-

MR. ALLEY, MR. PRATT (AN INVETERATE CIGAREITE SMOKER) AND THE RAMBLER TALKING BEES, AND THE TWINS EATING HONEY.

tions. Bro. A. is positive in his views, and believes his method of queen-rearing is *the* method. His claim, that queens should be reared from the egg, though not much discussed at the time, had the effect of setting the Rambler to thinking about the matter, and the results of our cogitations will be given in our next. RAMBLER

To the above was appended the following footnote by Editor Root.

[Now, look here, old friend: while we are greatly rejoiced at this pleasant glimpse of friend Alley's place of abode, when you tell us you "ran down stairs" on Bunker Hill monument we think you are getting decidedly in the way of skipping along almost too fast. I have been up and down those "stairs," as you call them, myself, and I did not feel very much like running. In fact I sat down and blowed several times be-

tween the top and bottom. I am very glad if you can see friend Alley's ranch from the top; but when I was there I did not know of friend Alley's place nor about bees either. In my next visit I will be sure to hunt him up— yes, even if he does, as I have heard, manage to get a good deal of tobacco out of the way. While we are in the open air, I suppose I should not mind it very much. That idea of a plantain leaf for closing an entrance is certainly unique. By the way, didn't I have a little hand in that discovery? You know I told you that Dr. Miller threw some green leaves on the top of any hive that needed attention. If they forget to remove the leaves when they go away, the leaves dry up and blow away. In any case, they know at a glance (by the looks of the leaves) about how long ago the mark was made. Now, then, if we wish to close an entrance, say for a few hours, a green leaf will fill the bill. In regard to introducing a queen by just letting her loose, I suppose some of you know you can do this at almost any time, about three times out of four. When honey is coming briskly, and the colony has been queenless long enough to start queen-cells, we can do it certainly nine times out of ten. I hope friend Alley will excuse me for remonstrating against brushing the bees off on the grass. Brush them into a hive, give them a comb or two, and some sort of queen, and let them be happy while they live. Keep them, like the old horse, for the good they *have* done. We do not like your reflections on gilt-edged apiaries, exactly, friend R. It is true, there are apiaries where the gilt-edged feature is carried to extremes. I have seen some of them myself — some of those professional men, for instance, who have lots of money. A real nice attractive apiary wants to be the work of somebody who has to scratch and scrape, just a little, to make both ends meet. This will keep out of sight superfluities (just for show), and yet have things neat and in order, arranged so as to give the greatest facilities for rapid work. I am very glad of that glimpse you give of the twins. We would not have missed them for anything. By the way, we wonder how *many* of the veterans have arrived at the dignity of being called "grandpa" by some little "new edition." Friend Alley, we lift our cap and extend our congratulations.] —*Gleanings, Feb. 15.*

Very good, friend Root. I will say in reply that "friend Alley" does not smoke or chew tobacco, nor get drunk.

Can't credit you anything on the plantain leaf. That was used in the Bay State apiary before friend Root kept a bee. Come on, friend R , we will give you a royal welcome.—ED].

STORIFYING HIVES AND THE USES OF THE QUEEN EXCLUDER.

On page 43 of API, allusion was made to the fact that a two-story hive of the capacity recommended, was the best hive for spring breeding. As it is now timely I will consider it in this article. The ten frame standard Langstroth hive has a capacity of 1350 square inches of brood comb. We have heretofore been taught that it was large enough for spring breeding, and so it is where no protection is given. Now we find that with suitable protection and good management that the average queen is able to occupy 1400 square inches of brood comb solid with brood but as there must be room for honey and pollen we must have two or three hundred square inches of comb besides. As the brood chamber I recommend has a capacity for only 830 square inches of brood comb, it is necessary to use a two story hive for spring breeding. This gives us a capacity for 1660 square inches of comb in the brood-nest which is none too large if we can get it filled with brood. The advocates of large hives and big colonies (which are almost synonymous terms) have steadily shown that the greatest results were to be obtained in such hives, that the larger the colony the more the surplus. And any one who will test one of the big hives and big colonies by the side of a colony in the common eight-frame unprotected hive will certainly be astonished at the results. I may say without reserve that we cannot get too many bees or

too much brood in our hives at the beginning of a honey flow.

Now it may cost some attention and plenty of stores to get these large colonies. We shall have to feed in many cases but if these things are the price we must pay to achieve success to the beekeeper who cannot afford the *price*, he ought not to grumble that his bees *do not pay*. Yes, it does pay to manage bees properly in spring. We cannot feed them a single ounce and not have it returned to us, and often tenfold. At least in ten years' experience, I have never fed that it did not pay, when feeding was necessary. Hence, I advise liberal feeding when no honey is coming in every day when the bees can fly up to the time the harvest begins. During fruit bloom it is not generally necessary to feed, but if it is cold and windy as it often is, then they should be fed. To breed fast, a colony should have on hand all the time at least 10 pounds of honey or its equivalent. I do not advise feeding any artificial pollen as it does not seem to be necessary, as the bees are usually able to gather all that is required, but no extensive breeding can take place without plenty of stores. On this account if we cannot give proper care of the bees in spring, they should go into winter quarters with from 30 to 40 pounds of stores.

To stimulate the laying of the queen and give energy to the workers, there is probably no one thing that gives such good results as opening the top of the hives down to the top of the brood chamber which should be covered at this time by a thin ($\frac{1}{4}$ inch) board, so as to let the sun shine full upon it on every pleasant spring day. The cover of the hive should be removed at 10 A. M., and returned to place at 4 P. M., but if this is done only once a week it will do. Sunshine is good for us all but I have sometimes thought that it seemed to give new vitality to the queen and bees.

DR. G. L. TINKER.

New Phila., Ohio.

(*To be continued.*)

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EDITORIAL NOTES.

EARLY QUEENS.

We expect to have queens ready to mail as early as May 20.

NEW BEE PAPERS.

Copies of all the new bee-papers have been received. There are so many of them we cannot devote space to notice them further.

A NEW BEE DISEASE.

A new disease has made its appearance in many apiaries. It is not a serious affair. Colonies afflicted with it may be known by the dead young bees at entrance of the hives. Mix a small amount of honey, water and salt and feed it to the colonies afflicted and in our opinion the disease will soon disappear.

Below is a complaint from a beekeeper who has the disease in his apiary.

BEES TEARING OUT BROOD.

What is the cause of bees tearing out sealed brood, in patches from the size of a silver dollar to the size of my hand? I had three colonies do it in June and July of last year, when the combs were filled with brood on both sides.

[Scarcity of food induces the bees to prevent the increase of the family to be felt. At such times they kill the drones, and even destroy the brood.—*Am. Bee Journal.*]

THIN WINTER CASES.

All hands coming down to the winter case for hives. That's it, friends, fall into line and keep up with the API. We had a patent on just this hive nineteen years ago. They have been used in the Bay State Apiary all these years. Well, it takes a good many years to convince many people that somebody else has a better thing than they have.

We are glad that Mother Earth did not claim us before some of our ideas in bee culture were adopted.

STRAY STRAWS.

It seems to please, as it is being copied in other periodicals. By the way, we might as well acknowledge the corn. We first saw the scheme in the *Apiculturist* and in the *Bee-Hive*. It is a good department, but you want a good man to manage it.—*Gleanings*.

EXPERIMENTS IN APICULTURE.

Bulletin number nine issued at the R. I. Agr. Experiment Station is on our desk.

Mr. Cushman gives his experiments "in the use of artificial heat to promote brood-rearing." Bottles of hot water were placed at the sides of the hive, a double-wall hive being used. We are now experimenting in that same line, but we use no hot water. We have placed a lamp in a box under a hive. So far it works well. The temperature is kept at about 80° in the hive, and the bees are spread over all the combs. On the morning of April 6, the temperature outside the hive was 22°—pretty cold; inside the hive, 85°.

The results of these experiments will be given later on.

PACKING *vs.* NO PACKING IN WINTER.

A young man who has an apiary in a town about ten miles from Wenham desired to sell out to us as he now has a situation with Paul Viallon, of Bayou Gould, La. On April 6 we drove to his place to look the bees over and to fix a value on the lot, as we proposed to purchase them.

There were some over fifty hives and but about twelve colonies alive, some of them quite weak. All the bees, save three colonies, were in double-wall hives, and were packed in sawdust. All of them were well cared for in the fall. Here is the result. The three colonies in box-hives were in good condition, notwithstanding the fact that one of the hives had lain upon its side for a long time. There were perhaps a half dozen fairly good colonies in the hives that were packed.

They were as bad a lot of colonies as we ever saw. The sawdust packing was the cause of the trouble. Had that young man read the API regularly he never would have spent his time in packing his bees as he did. The API has taken a strong stand against packing bees with any sort of material.

On our way home we visited another apiary of twenty-five colonies. There was not a particle of packing about any of the hives; in fact, some of them had on the surplus arrangement, the same as used the previous season. There was not even one weak colony in the yard. All were strong and in the best of condition. This is the difference between packing and not packing. We never were foolish enough but once to pack our bees. That was all the experience we needed in that line.

Now, readers of the API, if this lesson is worth anything to you, just heed it. Don't use packing between your hives in winter.

FOUNDATION.

We now have a full supply of the best brands of foundation. We keep in stock but two sizes, light, suitable for one pound sections and heavy brood for L. and Bay State frames, and at the following prices:

Heavy brood . .	per lb.	$ .50
Section . . .	" "	.55

QUEENS TO SUBSCRIBERS.

To avoid any misunderstanding we will say that all subscribers to API whose subscriptions were sent in before May 1, 1891, can get one of our best untested queens for 75 cents. The money to be sent when queen is desired.

Please understand that the price of the API one year and queen before May 1, is $1.50. After May 1, $2.00.

GAVE GOOD SATISFACTION.

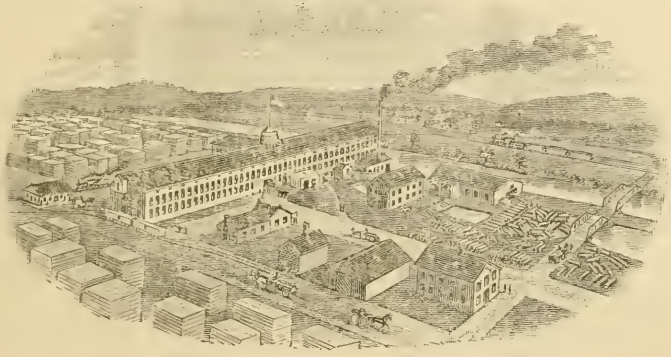
MR. ALLEY:—Last season I sold your drone-and-queen traps and they gave good satisfaction. I can sell more this year.

CHAS. WHITE, *Farmers' Valley, Neb.*

A GREAT INDUSTRY.

We can fully appreciate the rapid growth of this great honey industry, when we think, that only a few years ago all hives were either made of straw or consisted of a tight box, to secure the stores from which it was necessary to destroy the swarm of bees, while now there are innumerable varieties of hives, as well as every other imaginable appliance for the rapid and economical manipulation of bees. That, then there was no such thing as bee-hive factories in existence, while now, there are scores of them scattered, not only over this entire country, but Europe as well.

The foremost of them all, without doubt, either here or abroad, are the



WORKS OF THE W. T. FALCONER MF'G. CO.

great establishments of the W. T. Falconer Man'f'g Co., G. B. Lewis Co. and the Roots. There are others that lay claim to such distinction, but their claims are without foundation.

Our representative recently had the pleasure of being shown over the plant of the W. T. Falconer Man'f'g Co., and we believe a brief description will be of interest to our thousands of readers, many of whom are their customers. We are also, through the kindness of the proprietors, permitted to show our readers a cut of the plant exactly as it appears. It is situated in the pretty village of Falconer, N. Y. (so named in honor of W. T. Falconer's father), two and one-half miles from the bustling, growing city of Jamestown, on the outlet of, and about four miles from, the far-famed Chautauqua Lake. The buildings and lumberyards cover about five acres. The main factory is 230 x 50 feet, three stories high, with an addition of 100 x 50 feet. It is filled with machinery of the latest description, for the purposes required, and the facilities for doing fine work and doing it rapidly seem unsurpassed. One can form some idea of the magnitude of the establishment when we say there are $12,000.00 invested in machinery alone, and seven planing machines are running almost constantly. Adjoining the main factory is the fire-proof boiler and engine house. In the boiler room is a 60 horse power boiler for running the engine and an independent 30 horse power boiler for heating the factory, out buildings and dry kilns. In the engine room is a 60 horse power automatic engine and also electric light dynamo. Power for driving the machinery is furnished both by this engine and a turbine water wheel. A two-story structure 40 x 25 feet near the main building is used for storing beeswax and manufacturing foundation, while conveniently located within a short distance are the stables, saw-mill, store houses, etc., to describe all of which would take more space than we can spare; suffice it to say, everything is arranged everywhere with special regard to convenience.

The office is located about fifty feet from the main factory and is a model of neatness and convenience. It embraces a main office, mailing room, store room and private office. Five clerks are kept busy here and three typewriters are in operation continually.

The factory and other buildings are equipped with all modern improvements, including an electric light plant running 150 lamps, an electric watchmans' clock, an automatic time clock by which each employee registers his own time and automatic sprinkler system to guard against fire, with city water-works pressure and a 10,000 gallon tank of water on the roof of the main building as a secondary supply. There are also stand pipes with several hundred feet of fire hose on each floor.

The goods made by the W. T. Falconer Man'f'g Co. need no recommendation. They are as good as can be made, and the firm has built up an enviable reputation for honest and satisfactory dealing.

The proprietors of the firm are W. T. Falconer and E. E. Merrill, both comparatively young men but with old heads, and have had long experience in the manufacturing business. They are full of energy and determination; men to whom the word "fail" is unknown. Careful and conscientious, they have fairly won the laurels of success that they enjoy.

QUESTIONS AND ANSWERS.

MAKING FOUNDATION.

MR. ALLEY: Will you please state in the API the best lubricator to use while making foundation to keep the sheets from sticking to the rolls. P. L. SMITH.

I never have had much experience in making foundation. I think hard soap is used by most manufacturers of foundation for the purposes mentioned above A thin flour paste has also been used. I do not know that either works as well as it should or as desired.

DRONES IN WINTER.

MR. ALLEY: I notice drones going out and in my hives. I want to know whether they have been in the hive all winter. My colonies are in good condition and the drones look like young ones.

2. When is the best time to transfer bees?

3. How do you keep worms out of your hives? We are troubled a good deal with them.

JOSEPH P. SEWELL, *Cummings, Iowa.*

1. Should say, as the winter has been an open one in Iowa the drones were reared this spring. Drones will not live through the winter, as the average life of a drone is only about sixty days.

2. Best time to transfer colonies is just before, or about the time the bees commence to gather honey.

3. I know of but one way to keep worms out of the hive, and that is have your colonies strong. Worms do not destroy the combs till the bees are so reduced in numbers that they cannot longer protect them.

CARNIOLAN BEES.

MR. ALLEY: I am a beginner and of very little experience and would like to have your opinion in regard to the Carniolan bees. Are they better workers than Italians? I find them to be very good workers; but, as I am informed by Mr. Duval, they are great swarmers, I fear to invest in them. Mr. Duval said he gave the Carniolan bees a fair trial; they would do nothing but swarm, swarm, swarm. Will you please tell me more about them? I examined all my colonies, they are in good condition; but one thing surprised me—I found two eggs in one cell of about ten cells in a colony having a large, prolific Carniolan queen. What will become of the eggs? Will they both hatch?

GEORGE GEHR, *Mt. Winans, Md.*

Mr. Duval's statement of the Carniolans is correct. That has been the experience of all, or nearly all, who have tested these bees.

The queen laying two eggs in one cell is all right. Very prolific queens often do as your queen has done. Unless both eggs were deposited at the same time (which is not probable) one will hatch, and the other is removed. Both would hatch if one was not removed by the workers.

DIVIDING BEES.

MR. HENRY ALLEY: The two queens came in good shape last fall, but the bees

killed one as soon as they released her. I did not smoke them after putting the cage on the hive; the other I smoked and was received all right, and *have wintered the best of any colony I have.* After they swarm can't I divide the parent hive into as many colonies as there are queen cells giving one to each, dividing the bees equally and filling the hives with frames of brood from other colonies? Will their be bees enough to take care of the colonies and how soon shall I divide them after they cast the first swarm? Can't I put some of the bees back from the first swarm so there will be enough for the divided ones?

C. FRANK FLOYD, *Westernville, N. Y.*

To do successfully as friend Floyd proposes above, requires the hand of an experienced person. There are many difficulties attending an operation of this kind. Now, if I were intending to carry out the above plan I would return the swarm (after removing the queen) when they come out, and let them remain for six days thereafter. Towards night on the sixth day would get all the hives and necessary fixings ready and proceed to divide up.

But here a little trouble comes in. When the swarm is returned queenless, they at once commence to construct more queen cells, and this time instead of selecting eggs, larvæ will be used to rear the queens from. These cells should be destroyed. In order to know which are the best cells, and the first ones built, I would suggest that before the swarm is returned, the hive be opened and small sticks thrust through the comb near each cell to mark its location. About eight cells in all will usually be found.

Now for the reason why one should wait six days before dividing the bees. When the swarm comes off the cells have just been capped and there is great danger of injuring them. At any rate, I cannot handle newly built cells and have success in hatching all of them. But from six to eight days after the cells have been capped they may be handled about the same as peanuts. It will take a good deal of rough handling to injure the queens in them. *Don't expose the cells to the sun.* Now I will go back to the work required in dividing. Yes, you can make as many colonies as there are cells, and it is a good idea to borrow brood from other hives, provided there are bees enough to protect it.

Place the brood and cells in the new hives, divide the bees equally among them, and cover up. Now what shall be done with the new colonies? They cannot all occupy the old stand, and if they do a large majority of the bees will leave the new hives and go directly to the old location and then the whole thing will be a failure. The only thing to do is to remove all but two of the new colonies half a mile (one mile is better) from the old stand and let them remain three weeks at least. During this time the young queens will become fertile and all may be taken back to the home yard.

ITALIANIZING.

DEAR SIR: I have 49 colonies of black and hybrid bees. If I buy a few Italian queens can I raise pure queens?

All the bees near me are black.

Can queens be mated in hives without letting the queens out?

Archie, Mo. W. E. LEONARD.

I do not see how pure Italian queens can be reared under the above conditions. You would first have to get a colony of pure Italian bees in order to get the drones to fertilize your queens. The next step would be to procure a drone-trap to place on each hive of black and hybrid bees.

No. Queens cannot be fertilized in the hives. They must have a flight.

THE BAY STATE HIVE.

MR. ALLEY: 1. Do you remove the thin winter cases from the Bay State hive in summer?

2. Could I keep in the living room in winter a frame of bees in an observation hive?

3. Is there any way of uniting two weak colonies of bees in winter?

Fort Plain, N. Y. E. W. DOCKSTADER.

1. Yes, I remove the winter case in summer when the bees are storing honey.

2. I do not think you can keep a one-comb observation hive through the winter. I never could.

3. Unite bees by any of the methods given in the back numbers of the API.

FREEZING TO DESTROY MOTHS.

MR. HENRY ALLEY: Ought I to put my last year's sections that contain partly drawn out foundation out in the cold where they will freeze in order to keep the worms from hatching out next summer?

I would be greatly obliged if you would give me your experience in the above matter.

Hope, R. I. WM. M. CHIPMAN.

All the freezing that can be done will have no effect to destroy the eggs of the miller. The only thing that can be done is to keep the sections in a place where it is so cool that the eggs will not hatch before the sections are placed on the hive. The bees will remove all the eggs before they can hatch. There is little or no danger from worms after the sections are filled.

The other day I was thinking of an experiment I would try next fall. I think I will keep some combs in a warm room till the worms show themselves in the combs, and then place the combs in a cold room the balance of the winter to see if it will not starve the worms before spring. I do not know that it will. It may be like putting a fish under water to drown it. I think this experiment, however, worth testing.

APICULTURIST MAIL BOX.

BLACK CARNIOLANS.

FRIEND ALLEY:—Please continue the API to my address. Shall want one queen by and by.

I bought two colonies of bees for dark Carniolans and they were the most indolent bees I ever saw. They were too lazy to carry down syrup and would cluster on the outside of the hive all day and do nothing but sting all who were unlucky enough to venture near the hives. I think they were nothing but the worst kind of black bees. I lost them all.

Sims, Indiana. FRANK JOH.

A GOOD PAPER.

FRIEND ALLEY:—Sample copy of API to hand. I think it is as good a bee paper as I have seen for many a day. Find 75 cents for subscription, 1891.

Malden Bridge, N. Y. P. L. VAN ALEN.

A DAISY QUEEN.

MR. ALLEY:—Find 75 cents for API, 1891. I have a daisy queen from you. The bees are very quiet; nine frames full of brood and honey. How is that for March? I want some more of your "boss queen bees"

Eustis, Lake Co., Fla. A. C. HART.

BEES WINTERING EXCELLENTLY.

MR. ALLEY:—Please register my order for two of your best queens. The bees from the queen you sent me last year are wintering excellently. When the bees in other colonies are on the wing on warm days those from your queen do not appear to be alive, but they are in splendid condition.

Burket, Ind. G. W. SNYDER.

Bees that are wintering well are not early disturbed. It requires considerable noise about the hive to arouse them. Nearly all our colonies are in same condition as the one mentioned by Mr. S. —ED.]

HENRY ALLEY:

Dear Sir:—I congratulate you upon the fine appearance of the January number of the APICULTURIST. You are certainly making a good paper. We had the poorest season last year ever known to bee-keepers in this part of Iowa. From 75 colonies I have not sold a pound of honey. Our weather here is very fine. There has been hardly a day this winter that bees could not have flown if in the open air. We all winter in the cellar. Bees have been in since about the middle of November. They are very quiet, and much better off, I think, than if out doors. I find that cellar wintering is economical as well as safe, in this cold climate.

The last two winters the consumption of honey in the cellar from the middle of November to the middle of April has averaged about ten pounds.

Forest City, Iowa. EUGENE SECOR.

CAN'T GET THE QUEENS.

MR. H. ALLEY:—I see you want bees, would like to trade with you. If I sell you bees, you will not get any of the progeny of the queens you sent me last fall. I tell you there is a vast difference in my bees. It is a pleasure to stand beside the hives on a fine day and see the young beauties at work; large and yellow.

Fayetteville, Tenn. JNO. SPIERS.

A GOOD QUEEN.

I successfully introduced one of the two Italian queens I got from you last summer and she has produced a hive full of the best honey foragers I have. I trust the

queen received from you last month will prove as good. I don't think she could do better. Awaiting your attention, I am,

Yours truly,

Lloyds, Va. P. K. PANNAN.

JUST SO, FRIEND ROOT.

There is something in the APICULTURIST that sparkles. It has lots of short, pithy items.—*Gleanings, March* 15, 1891.

HOW TO USE SELF-HIVER.

The hiver should be placed on the hive about a week before a swarm is expected. This will familiarize the bees before they swarm with the changed appearance of the hive.

Send one dollar and get a swarmer by return mail and test them for yourself.

We don't care to do any bragging about the hiver, but will say that for any swarm that decamps, or for any queen that gets through the metal we are ready to pay $10. Dr. Tinker's perforated zinc will be used on all the swarmers, and it is simply impossible for a queen to pass it.

Occasionally when a swarm issues the bees may cluster on some object for a while. No one need give himself any uneasiness if they do not return immediately. They will not go away without their queen.

Now how much better it is for the beekeeper to use the self hiver than it is to spend his time watching his bees. When the beekeeper uses the swarmer, he need not say when going from home, "Wife, watch the bees, I think they will swarm to-day." Put the swarmer on the hive and be absent a month if you desire. The bees will be all right when you return.

Don't climb way up forty feet in a tree for a swarm of bees and run the risk of breaking your limbs, when it can be avoided for about fifty cents per colony. Why, it would cost several hundred dollars should you break only the bone in one leg. When a beekeeper cannot afford to pay seventy-five cents for a good bee-paper for a year, he certainly cannot afford to break one of his legs. See the point?

We will sell you one swarmer and ship by mail, for $1.00, then if you like it and want to manufacture them for your own apiary, just send $4.00 more and we will send you the right to make one million for your *own use*, only.

One dozen swarmers in the flat, by express, $9; half dozen, $5. One swarmer in each lot will be nailed. If you desire to sell them, or want to purchase a township or county right, just write us for terms. If you merely wish to sell them, the best plan is to purchase them by the quantity in the flat, nail them up and sell them anywhere in the world that you can find a purchaser.

After May 1 the price of our work on rearing queens, "Thirty Years Among the Bees," will be advanced to one dollar per copy. Or the API will be mailed one year and one copy of "Thirty Years" for one dollar and fifty cents.

Our advertising rates will be two dollars per inch. Special rates given on large ADS. and those inserted for six months or one year.

This arrangement does not apply to any contract made previous to May 1, 1891.

We have also advanced the prices of Italian queens. After this date orders for queens will be accepted only at the following prices:—

For one to three queens, each $2.00
For six queens, each $1.75
By the dozen, each $1.50

Prices for golden Carniolan queens will be the same as for those reared from our TWO-HUNDRED-DOLLAR QUEEN. All queens will be tested and satisfaction guaranteed in every respect.

HILL'S FEEDER AND SMOKER.

We have received both of these things and they are all friend Hill claims for them Have used the feeder this spring but shall test it again. Smoker is a cold blast and does good work. See his ad. on another page.

Salisbury's foundation for sale here.

MICE IN HIVES.

Again we come for advice. What should we do without the API and its editor? We want to make a workroom such as you so often say every beekeeper should have for use in summer time, for the multifarious duties connected with the apiary; not a shop where the carpenter work is to be done, we have that well equipped but too far away, and windows looking in the wrong direction, nor a honey house for we have ample storage room; but we have thought of something more in the style of an inclosed grape arbor as it will have to occupy the site of an ancient one. We prefer it of octagonal form about ten or twelve feet in diameter and so built as to be ornamental as well as useful. Now what we want to know is how to arrange the interior so to combine the most convenience in this space. Of course there must be a bench for work and shelves, closets or drawers underneath for storage. Please throw a little light on this vexed question and you will greatly favor us.

Now to take issue with you on another question. You say in Jan. API that you never knew mice to trouble honey when there was anything else for them to subsist on.

Last fall we piled several hundred pounds of honey on a table in the attic to ripen, never having learned that mice would trouble it, but a short time after we found four of our best sections not only uncapped but the honey sucked out clean as far as the combs were uncapped and they had not touched the comb on unfilled sections. Of course we didn't wait to experiment further to see what they would do again. We had a two quart Mason jar of extracted honey, saved to make candy in spring, the cover of which was carelessly left off; looking at it to day we found nearly half of it gone and a dead mouse lying on top of the remainder; how they ever managed to get so much out of the jar is the mystery, as it did not stand within several inches of anything else, and they must have jumped down from some taller articles on top of the edge of the jar, but we are satisfied mice will eat honey. Perhaps it is because ours is so nice, but please instruct beginners how, if they should be fortunate enough to secure any honey, to take care of it and avoid mice, moths, mould and misery, for we have found experience to be a somewhat expensive teacher, as in this case, which is but one of the minor ones.

MRS. G. M. BARKER.

Natick, Mass.

How to construct a honey house and bee room may be found in the back numbers of the API, also in "Thirty Years Among The Bees."

Yes, we said mice would not meddle with honey when there is anything else for them to eat. In the above case it seems to us that honey was about the only article of food within their reach. —ED.]

PRICE OF THE BAY STATE HIVE.

After March 10 the prices of this hive will be as follows:

One or more hives complete $3.00.

In the flat, by the half dozen, each $2.50.

Prices of the drone-and-queen traps will also be advanced to the regular rates, viz.: per half dozen, $2.00; per dozen, $3.50.

We are now getting a large number of orders for these goods and desire to get over the most of this class of trade before our queen-rearing business begins.

We shall import light Carniolan queens to breed from this season and shall do our best to keep the stock up to its present high standard and surpass it if possible.

It is acknowledged by many that the APICULTURIST is one of the best advertising mediums for those who deal in beekeepers' supplies. The fact that our paper circulates largely, yes, almost wholly, in the western states, offers the best inducement to western supply dealers as an advertising medium. Try an AD. in the API and satisfy yourself that all we claim is true. We deal some in supplies, but those who advertise in the API get nearly all the western trade. We do not get much of it.

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THE AMERICAN

APICULTURIST.

A Journal Devoted to Practical Beekeeping.

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STORIFYING HIVES AND THE USES OF THE QUEEN EXCLUDER.

—DR. G. L. TINKER—

(*Concluded.*)

In my article on page 70, reference was made to the proper capacity of hives for spring breeding and their management. As showing what may be done in the line of brood-rearing, I will say that last spring I had one colony with brood in 4 stories of the Nonpareil beehive, and I estimated that there were fully 25 frames of brood on the first of June, or about what would be contained in two 10-frame L. hives with every cell occupied with brood. The result of getting so much brood in a colony just before the harvest proved what has all along been claimed by expert apiarists. The colony produced over 90 pounds of extracted honey (poorest season we ever had), all of which had been sealed in the combs. The colony occupied 8 stories and built out one full set of combs from foundation The best yield of any of my other colonies was not over 25 pounds of comb honey, and in every instance the colony having the most brood on June 1 made the most honey. It will be seen therefore that the common 8-frame hive is too small to cut much of a figure in comb honey production (or extracted either) unless it be used in more than one story in the development of brood. But two stories of the 8 frame L. hive give more breeding room than the average queen is capable of occupying before the harvest. The size of the brood-nest should therefore be suited to the average colony, or two stories of the Nonpareil hive, which have a capacity for 1660 square inches of brood comb. Every effort should be made to get brood in our colonies up to the time the harvest begins when the sections are to be placed.

CONTRACTION

of the brood-nest is then advised and the queen limited to one story of the hive by the use of the queen excluder. Place the case of sections on the excluder, and if there are one or two other stories of brood set all on top of the case of sections. If the combs are old and black, I place what I call a *brood board* between the case of sections and the upper stories of brood. This is simply a thin board cleated around the edges so as to make a bee space and provided with a strip of two rowed zinc at one side. Mine are made like the wood-zinc excluder except there is but one piece of the two rowed zinc, the balance of the surface being closed. In placing brood above a queen excluder or the brood board, it should not be forgotten that a $\frac{5}{8}$ auger hole must be made in the front end of the story for the drones to get out. This is easily closed by a common cork when not needed. The use of the brood board limits the storing of honey in the upper story, as the brood hatches out so that the energies of the colony in storing surplus are centred in the sections. It also prevents the combs in the sections from being travel-stained, except at the extreme outside.

If the bees swarm they are to be managed as set forth in my new book thus preventing increase. Care must be taken that plenty of section room be provided, else the whole hive is liable to become clogged up with burr-combs. The sections may be removed as fast as completed and empty ones substituted, handling four at a time in the wide frames; or, if a case of sections is found not quite sealed up, it may be lifted to the top of the upper story until completed, and a case of empty sections put down on the excluder. Thus two and often three cases of sections will be needed. By raising up the sections just before the combs are sealed to the top of the upper story, the brood board is not necessary, but in this case we shall get the story full of honey as the brood hatches out. This honey, however, will be available for wintering or it may be extracted. I generally leave it for the bees, but often extract a part of the combs. If we leave it we are always sure of the necessary stores for winter without fall feeding; provided we leave the queen excluder on the first story. After removing the sections at the close of the harvest we place the full story of honey down upon the excluder. In this manner we compel the economical use of the honey left the bees; but if we take away the queen excluder at the time of removing the sections and bring the two or more stories of the hive together, the queen will go into the upper story and the result will be brood in all of the stories and so much honey will be consumed that the colony may need to be fed for winter in case of failure of the fall flowers, which would not be the case if the excluder had been left in place and the queen confined to the lower story. To be profitable, bees must be self-supporting, and we can ill afford to be obliged to feed for winter. But with a large brood-nest full of honey at the close of the harvest, as we have heretofore managed, we are sure to have a great waste of the stores in unnecessary brood rearing. After the first of June one story of the Nonpareil hive is ample for brood-rearing the balance of the season even where fall honey flows are the rule and not the exception as in most localities. And it will be found that on the first of October, the colony will have as many bees as where the queen is not limited in brood-rearing during the latter part of July and August when the colony is disposed to rear almost as much brood as in the great brood rearing month of May.

On the first of October or thereabouts, the excluder must be removed. Should we forget it, we shall be sure to lose the queen as the bees in the course of the winter all go up into the upper story, leaving the queen alone below the excluder.

BURR-COMBS.

One of the remarkable features of this new management first made known through the columns of the Api, is the fact that it almost entirely obviates burr-combs with top bars one-inch wide and $\frac{3}{8}$ thick. But if we place the sections on top of a two-story hive or if we hive a swarm in one story with a case of empty sections, we are sure to get many burr-combs. After hiving a swarm in a single story, it is best to take a case of sections in which the bees are well at work from the parent colony, and place over the queen excluder on every swarm. If one cannot be taken from the parent colony, take one from any colony in the apiary, taking bees and all and place upon the swarm just after hiving. As tending to prevent absconding I regard it fully as good as a frame of brood, but it has been my practice to put Alley's queen trap before every swarm hived for two days, as a precaution against possible absconding, arranging the trap so the queen can return to hive as often as the bees may swarm out. The case of sections containing partly-built combs prevents the building of burr-combs below the queen excluder, and not only saves much labor in cleaning it up, but when we want to examine the brood-nest, we can readily do so without the disagreeable operation of tearing off burr-combs.

I have thus given some of the principal points of advantage of the storifying hive in connection with the use of the queen-excluder, and as will be seen these advantages are such as to give the utmost control over brood-rearing, the economical use of the stores and the most profitable honey production. Add to this the comparatively easy management of these small hives and their superior wintering qualities, and it must be granted that we have the nonpareil of bee hives.

New Philadelphia, Ohio.

A FEW BEE NOTES.

The past winter at Lancaster has been a hard one on bees in that there were such long spells of cold followed by windy and but slightly warm weather. The bees felt the need of a flight, and were tempted out by the sun only to fall on the snow. However, I should have wintered mine very well but for a costly experiment.

Last season the bees gathered no honey after July 15 and, of course, had to be fed for winter. Pressed for time, I did not feed sufficiently in the fall, intending to feed more during Christmas week. At that time I cooked up about a hundred pounds of candy. Some of this was the syrup left from the fall feeding, which I cooked right in with the rest. This syrup had about three pounds of honey in it. The candy was placed in large cakes over the frames. During the winter the candy softened, probably from the honey present, and running down broke up the cluster. Only such hives as were very strong and vigorous survived the shock by consuming the sticky mass. This killed nine colonies for me besides being the direct cause of the present weakness of about ten more.

My daughter of Alley's two-hundred dollar, alias one-hundred dollar queen, played a freak during January. Being thoroughly aroused by the feeding in the winter, she began to lay. Three frames were well started with brood, when the bees shifted their position for want of stores leaving about half the bees with the brood. Fortunately the queen went with those bees which moved. At present the colony is pretty weak.

The weather has been rather cool for spring forcing. The bees are greatly opposed to starting much brood, and it takes a good deal of coaxing to get a small colony into shape.

Those good old colonies which stored such a surplus last season, and had plenty of honey to winter on, are the ones which are booming at present. As the queen is, so is the colony. Don't keep any but the best queens.

What do so many of us mean by claiming that the black bee is smaller than the Italian? I have seen enough colonies of either race to draw a conclusion, and I say emphatically that the black bee is the larger. She is stockier and probably weighs more. It is true, though, that the Italian has a larger honey sac, and so when full of honey appears to be larger.

By the way, is a large or small queen preferable? Of course, we all say the large one is. However, a few years ago when raising queens I had a very small but unusually yellow queen hatch out. I kept her because she came from my best stock and was of such a beautiful color. The hive in which she was, led the apiary for the next three seasons. Though of small build, when in full laying condition this queen did not look small at all. At such a time an unobserving person would have called her a large queen. Just so do most of us say that the Italians are large, because we think of them as we have seen them with their abdomens extended with honey.

I expect to try an interesting experiment next June. A neighbor has four or five acres of raspberry bushes. He has given me permission to place a colony of bees in the middle of that patch when it is in bloom. I expect to find out by this something about raspberry honey.

Now a word about rats. The pests

got into my honey house last winter and spoiled quite a number of boxes of honey besides eating the honey out of several brood frames. I put a cat and her four kittens in there and I think that the rats are pretty well driven away. They are indeed a great pest and are capable of doing lots of damage.

This coming season I shall use Lewis' two-piece section. In some respects I think it is better than the one-piece. Perhaps by the end of the season I shall be disgusted with it.

ALLEN LATHAM.

Cambridge, Mass.

BIG BEES, CROWS, BLACKBIRDS, ETC.

DR. C. C. MILLER'S REPLY TO SMITH AND ALLEY.

So you don't think my crow and blackbird fit the case, eh? And you want me to try my hand a' it once more. Well, here goes. If I've counted straight you ask seven questions, friend Alley, and I'll try to answer them.

1st QUESTION. "Does the reader suppose that if we rear larger bees we do not increase all other functions in proportion to size?"

ANSWER. That's just exactly what *this* reader supposes. Can you show that such a supposition is wrong?

2d QUESTION. "What object could any one have in view in rearing larger bees but increased powers?"

ANSWER. I don't see any. That's why I can't see any use in it.

3d AND 4th QUESTIONS. "Suppose the crow has all its powers increased in proportion to its size, when compared with the blackbird, what then? You seem to have overlooked this part of it, didn't you, Dr.?"

ANSWER. No, I didn't overlook it. On that supposition there would be a gain if Cheshire's objection doesn't come in that the bees and the flowers must be fitted in size to each other. Still a bumblebee seems to work on white clover very well. But suppose all the powers of the crow are *not* increased in proportion to size, what then?

5th QUESTION. "Why not compare a humming bird to a crow?"

ANSWER. Why not?

6th QUESTION. "Which of the two has the larger carrying power?"

ANSWER. The crow, by all odds. But according to size, I suppose the humming bird.

7th QUESTION. "Now if we can rear a strain of bees whose honey sacs are three times as large as that of the common race of bees, we have gained a point, haven't we?"

ANSWER. I don't know, but I think so.

I don't see why there may not be improvements in bees, but I don't believe it will be any improvement to make them bigger. Do the experienced pick for the largest queens? Let me quote from the Beekeepers' Handy Book, written by Henry Alley, a man of large experience in queens, and for whose word in that direction I have very great respect when he bases that word on his own experience. In that book he says: "I must confess that I like the appearance of large and handsome queens; but they do not as a rule prove to be the most prolific or profitable. Queens of medium size are generally the best. They have proven so with me."

Now it's your turn

In spite of being so full of wrath at you, friend Alley, I must say that first page of cover on the April number is one of the neatest things I have seen.

Just no reply at all. Say what you please, Dr., we would like larger bees, and for the reasons heretofore given.

—ED]

REPLY TO MR. SMITH IN MAY AM.

Brother Smith sets up some words of mine as a target on page 66, and then does some firing, but I cannot see that he aims at the target at all. Let us see just how the matter stands. On page 21, Brother Smith, you say, "Double the size of the bee, and you double the distance it could go for honey." I refer to that, and then say, "Does a crow fly any farther or faster than a blackbird?" That's as much as to say that I don't

believe increasing the size will increase the speed. Now I don't see that you say anything on page 66 to bear upon the point except this, "The fact that the present Italian bee travels *farther* and *faster* and gathers more honey than the common small black bee, and that their size is what enables them to do so, demonstrates that this is the road to follow."

Bearing in mind that the point in dispute is "double size and you double distance," it will be seen that the part of your statement that bears on the case is that Italians fly farther than blacks because of greater size. Now is your "fact" a fact? I don't know, but I do not now remember any proof that Italians fly farther or that they are larger. Until you furnish such proof, I don't see that I have anything to combat.

Allow me to say before I close that I have entire respect for your earnest desire to improve the bee, and am not entirely without hope that some good will come of it. My only desire was to try to point out wherein I thought you were steering needlessly astray. I have sent to Bro. Alley a reply to his remarks on page 60, which bears on the case, so I will not repeat what I have there said, hoping you will do me the favor to read it. Your point that increase of size, especially of tongue, leads towards getting red clover, is a good one. To accomplish a strain of red-clover storers is worth a great deal of effort.

In reply to your question, I can only guess that Mr. Heddon may want to sell old combs because he does not want frames of that particular size. But that's only a guess. For anything I know, Mr. Heddon may prefer new combs, but I doubt it. I can reply to your question about myself, that I have never sold an old comb, and if you were to offer to trade brand-new combs for any or all of my old ones, I wouldn't trade. I may be wrong, but I am giving you my honest opinion.

Selection may accomplish much, but I cannot see how the size of worker cells can have any effect on the queen progeny, nor do I believe increase of size will bring increase of speed, till I see the heaviest horses used for racers.

C. C. MILLER.

Marengo, Ill.

You dodge the target so that a fellow can't hit you. No, the heaviest horses are not used for racers, nor are the smallest horses used to do farm work, or to haul large loads.—ED.]

A PASSAGE WAY FOR BEES OVER THE COMBS.

What shall we use for the above during winter? I think it is very necessary to have a chance for the bees to cluster and pass over the combs while in winter quarters. I have used Hill's device and tried very many other ways, and will tell what has been the most satisfactory of them all to me. Perhaps others might try it and if they have got anything that will give better satisfaction, I should like to hear from them. I use two frames of combs, what I call honey or extracting frames, such as I use in my style of hive. First I will explain these frames of combs as many may want to know the size, etc. These frames are $12\frac{3}{4}$ inches long, $4\frac{1}{4}$ inches deep, by $1\frac{7}{8}$ inches thick which gives combs $1\frac{1}{2}$ inches thick, the thickness of box-honey. I take two of the above frames of comb (no honey in them) and lay crosswise on top of the brood frames, lay them down flatwise, parallel to each other, about two inches apart, then cover all with cloth, and packing or whatever is used. On examining a colony fixed in this way, after they have gone into winter quarters, you will find them clustered underneath these combs, also packed full in this space between the combs. They appear to be very comfortable and quiet. I think one good feature of this way is that the combs lying flatwise retain the heat, does not let it all pass off, keeping the bees more comfortable and allowing them better circulation.

WM. NORTON, *Skowhegan, Maine.*

We are inclined to the opinion that the above is original with friend Norton, and it seems to us is a grand good idea.—ED.]

LIGHT WEIGHT PACKAGES OF HONEY.

A WARNING TO BROTHER PRATT.

To the Editor of the Api:

I saw some time ago in the columns of the Api that Mr. Pratt notices a growing demand in Boston for light weight sections of comb honey, and intimating his intention of producing some next season, to which I wish to enter my protest, because he will thereby be furnishing the *club* to the *retailer* of those light-weight sections to beat down the price of *all* comb honey.

To illustrate: 1st, a section $4\frac{1}{4}\times4\frac{1}{4}\times\frac{5}{16}$ equal one pound comb honey.

2nd, a section $4\frac{1}{4}\times4\frac{1}{4}\times1\frac{1}{2}$ to $1\frac{3}{8}$ equal $\frac{3}{4}$ pound or 12 oz.

Take a case of 24 one-pound sections weighing 24 lbs. at 18 cts., cost $4.32, retails at 25 cts. a package profit $1.68 to retailers or nearly 39 % on cost!

2nd take a case of 2 24 sections weighing 18 lbs. at 18cts., $3.24, retails at 20 cts. package, profit $1.50 to the retailer of more than 48 % on cost.

The shrewd buyer for the large grocery houses of Boston purchases these light weight packages of honey first of the season, who artistically display them in the windows of their stores at 20 cts. package; the public buys them fancying they are getting one pound, and that establishes the price, that a package of honey $4\frac{1}{4}\times4\frac{1}{4}$ must be sold at 20 cts. retail.

In the meantime the honest weight pound package of comb honey lies in the commission merchant's care, until he is tired of having it round, or the *owner* is tired of waiting for his money, or some of the many conditions come round right to let that "*shrewd* buyer" clean up the round lot left at $12\frac{1}{2}$ cts. per pound or less. Then pass by those show windows, and see your honey displayed temptingly, with a card calling attention of the public to the low price and guarantee of *one* pound *honest weight* for only 18 or 20 cts.

This did not happen this last season, because there was not honey enough to go half way round, but you let a good season come and it will be repeated as it has been in other years.

Getting a "trade mark" for all beekeepers' use is *nonsense*. It reminds me of a friend in the liquor trade who advertises the best *old Gibson's whiskeys* for sale and for every barrel of old Gib, he buys he has ten ba rels of "*40 rod sure death*," and sells it all out of the trade mark "Gibson's" barrel; that is the way it would be with trade mark honey. If we could have a *U. S. law*, making a standard size section for one-pound size of honey, one-half pound, two pounds also if you like, and a penalty for counterfeiting that package equal to same for making counterfeit money, it would be well for the honey trade. Why not have a bounty at 2 cts. per pound for the sugar after the honey has granulated?

Novice.

INTERESTING LETTERS FROM SUBSCRIBERS OF THE APICULTURIST.

THE VALUE OF THE DRONE AND QUEEN TRAP AS USED IN THE APIARY OF FRIEND KANZLER.

Friend Alley: My subscription to the valuable American Apiculturist runs out with the August number, 1890. Therefore please find enclosed a money order for $1.75, subscription for another 16 months, *i. e.* until 1st of January, 1892, and 75 cents for a queen, daughter of the $100 queen. I improve this opportunity to tell you that your queen-trap is a very great invention to the beekeepers, for it saves labor and time in finding and catching young queens. I have used it since 1886 and sometimes did not cut out the queen-cells, but I caught the young queens by the trap and put back the second swarms; in one after-swarm I caught this season seven queens; three were dead (killed in the trap by the others) and four alive.

Wm. F. Kanzler, *Fulda, Ind.*

LOOKS LIKE A LUMP OF GOLD.

Henry Alley: The queen you sent me in September, 1890, came to hand in good condition. She looks like a lump of gold, and she has got as nice a

family of children as I ever saw. They go out to work when you can not see another bee out of other hives, and come home loaded. They are the bees to have around. I will renew my subscription so as to get more of such queens, and have a friend that will get some. Please put down my order for one.

JOSEPH R. JONES, *West Cornwall, Vt.*

HIVE FULL OF BEES.

H. ALLEY: Some weeks ago I sent to you for a queen which I received in good order. She has a hive full of bees at this time, and every one of her combs is two thirds full of young bees and eggs. I am very much obliged to you for so nice a queen.

L. A. WEBSTER, *Strafford, Mo.*

MAKING NEW COLONIES.

FRIEND ALLEY: I presume you like to hear a good word for the daughters of the $100 queen. The one I ordered of you arrived July 1st. I did not dare introduce her as you directed, as I had lost two that way; so I let her and her escorts loose on two frames of capped brood and one frame of honey. The first two days they pulled out a good many of the larvæ *not* capped; after that the bees hatched pretty fast, but weather got so cold (44°) that I filled two one-quart fruit jars with hot water and put them in the hive to keep them warm, the queen began laying in a few days, and I gave her another frame with a little brood in it and four frames with foundation. By the first of August I had quite a strong colony; as there was very little forage, I gave them four pounds of granulated sugar dissolved in one quart of hot water; the workers are beauties and hard workers too; but they had a hard time to get more than a living this year. I have taken off but seventy pounds in one-pound sections this year from four hives and increased to six; last year I had seventy from two hives. Think I could do much better if I was not away from home twelve hours every day, except Sunday.

JOSEPH F. BARTON, *Chicago, Ill.*

PREVENTION OF AFTER SWARMS.

FRIEND ALLEY: In looking over the API, I can find no clubbing list, I should like to know the price of API and A. B. J. for '91.

On page 8 of Jan. number, under "Prevention of Afterswarm" you say your practice is to destroy all queen cells any time within three or four days, and then introduce a young queen. With me that plan invariably fails. My way is to cut cells as soon as possible after the swarm issues; not later than the third day, and again on the tenth day from issue of swarm and in about a week introduce a fertile queen. This plan usually works like a charm; but the past season some of the most prolific queens filled the ten frames (L. size) and led out a swarm in from four to six weeks.

S. B. HITCHCOCK.

Troy, Vermont.

The plan of introducing a young queen has never failed to do the work in our apiary, and we never heard of its failing in any case accept as per above.—ED.]

SWARMING; DESTROYING DRONES; WHY DON'T BEES STORE HONEY?

MR. HENRY ALLEY: Last May when I was at your place I purchased of you one of your patent Bee Swarmers and put it on my hive immediately on my return, and let it remain till the 5th of August. Thinking the swarming season was passed, I removed it the next day. At about 7.30 in the morning, a very large swarm came out which I hived. On the 16th a smaller swarm left the same hive which I also hived, but the next day they departed for parts unknown.

At the time I removed the swarmer from the hive, I examined the hive carefully but found *no honey* except in the brood section; this appeared to be full. I also saw large numbers of drones going out and in the hive; thinking they

might be subsisting on the honey, I put on part of the patent hiver, and when they came out they could not return so that large numbers perished.

The bees do not appear to be specially active in the hive and I do not think they are storing honey.

Did I do right in destroying the drones?

Why don't they store honey?

They are Italian bees and recommended as good workers.

If you or any of your experienced and valuable correspondents of the APICULTURIST will set me right through your valuable journal, I will be much obliged. Having purchased a colony of bees, I want to make a success of them. But no doubt you have discovered that I am a novice and need instruction.

Trusting that I shall get set right,

I remain yours truly,

ELISHA MYRICK, *Melrose, Mass.*

Bees in this vicinity are not very active after July 10. There is nothing for them to do but to loaf from July 10 to Aug. 20, when the fall honey comes on.

Yes, you did right in destroying a part of the drones.—ED.]

AN ENTHUSIASTIC BEEKEEPERS' OPINION OF QUEENS REARED FROM OUR HUNDRED DOLLAR QUEEN.

FRIEND ALLEY: Accept my order for four queens from your one hundred dollar queen. It is a pleasure indeed to me to know where I can obtain the best queens in the United States.

I wish to inform the kind readers of the API, if they will call at my store in Blacksville, W. Va, I will gladly take them to my apiary and show them a colony of bees with the most beautiful queen and uniform progeny that ever they beheld, raised from a royal daughter of friend Alley's one-hundred dollar queen. I am confident my friend will exclaim as did Bro. A. I. Root. I am surprised, yea, astonished, at the state of perfection in queen-rearing to which friend Alley has attained. This I say from a personal and practical experience in beekeeping for the benefit of the fraternity, and lo and behold, friend! the half has not yet been told of Mr. Alley's queens.

SAMUEL THRALLS, *Blackville, W. Va.*

DESTROYING MOTHS; THE HONEY SEASON IN TEXAS; MAKING QUILTS FOR HIVES; A BEE PAPER NEEDED DOWN SOUTH.

MR. EDITOR: I will give you a few notes from the Lone Star state. The swarming season is upon us. Prospects good for a honey crop. As we are troubled with moths on our empty combs, I will tell you how to beat them. When a trace of moth is found, soak your frames in clear water 24 hours and place them in extractor and throw water out and hang up to dry. To make quilts to cover hives, take any thin cloth, dip in melted bees wax and bees won't cut them much. We need a Southern Bee Journal or a Southern Department in some of the prominent journals. With nearly 200 full colonies now at swarming time we don't get time to walk much; it's a skip, hop and a jump.

JENNIE ATCHLEY, *Farmersville, Texas.*

STILL ANOTHER GOOD QUEEN.

HENRY ALLEY: I enclose you 75 cts. in stamps to pay for the queen you sent me to take the place of one that died. *Many thanks.* She could not be had for four times the amount. Have raised a few from her which are very pretty. Hope you may have good success.

A. L. BEACH, *Pineville, N. C.*

A GOOD REPORT FROM TEXAS.

MR. H. ALLEY: As I never see anything in the API from this portion of the sunny south, I thought I would let you know we are keeping bees. Down here, bees began gathering pollen early in February. Brood-rearing is now in progress in the Lone Star Apiary, owned by Mr. Urban, of Thorndale. Some of the finest Italian bees in the world can be seen in his large apiary, and some of them came from the Bay State Apiary. We never have any trouble in wintering bees here; the weather is

warm and pleasant, and everything looks promising for 1891. C. B. BLACKSTONE.

Feb. 22, Thorndale, Texas.

WHAT A "GREENY" DID.

MR. H. ALLEY: Enclosed find $1.25 for which please renew my subscription to the API for one year, and send the two books as per advertisement. I find the API invaluable to the beginner and the last year has shown that some of the "know it alls" might peruse it to advantage.

One year ago I started in with three swarms, one good one and two weak ones. Being a "greeny" I wanted some bee magazine to swear by or *at* as circumstances might dictate, so I subscribed for API. Following the advice found in its pages I built up my swarms until one was a boomer and the other two not far behind. It was a very bad season here and other bees in this vicinity made no honey in the sections, but mine were so strong that one colony made over 100 lbs. of surplus and the weak ones, after getting built up, about 25 lbs. each.

But the best of all is that while nearly every swarm of bees in this vicinity have died this winter mine are *all right.*

Should like some of your queens but haven't developed quite "sand" enough to open a hive and hunt for the old one. Shall put my new swarms in Bay State hives this summer which I suppose you consider the next best thing to having one of your queens. Hope the books will come promptly as they doubtless contain information which I am in need of. RUSH VAUGHAN.

So. Pomfret, Vt.

THE NAMELESS BEE DISEASE.

THE REMEDY RECOMMENDED BY THE API WORKED A SPEEDY CURE.

We wintered fifty colonies of Italian bees. Out of the fifty, twenty-four came through badly affected with the "nameless disease." We applied your salt remedy published in January APICULTURIST and am glad to say that they are now apparently well.

Two years ago, only one colony was affected, and this during an abundant harvest of white clover. We changed the queen, and thought we noticed a change for the better, but last year, this same colony was diseased the same way and six other swarms.

The first colony affected by this time had a very prolific and good queen, which we did not like to destroy, so, nonplussed as to what to do, we did not do anything but let them alone. Had it not been for your remedy our hopes would have been small indeed this spring. Many thanks for this and all the valuable matter in your journal, the AMERICAN APICULTURIST.

MRS. MILTON CONE. *Chillicothe, Mo.*

FASTENING FOUNDATION IN FRAMES.

H. H. Nash, Santa Monica, Calif., says this: "I have found a hot iron, one-inch wide, with one end covered with a cloth, the best thing for fastening foundation. I lap foundation half inch on comb guide of top bar, press down hard and draw the iron from end to end."

GOOD PROSPECTS FOR BEEKEEPERS IN TEXAS.

J. D. Givens, Lisbon, Texas, says:— "We have a fine prospect for a good honey harvest. My hives are strong in bees, and are storing considerable honey."

ALFALFA-CLOVER HONEY.

Alfalfa honey is not only the finest in appearance of any honey that I ever saw, but it is also equal in flavor. It is almost, if not quite, as clear as water, and yet, during a hot day in July, it will scarcely run. It is as clear as a crystal, and exquisite in flavor. Very likely the producer has not a ton of such honey; but if he has, I should think it would be a small fortune, if he could get it before the class of people who buy gilt-edge butter, and things of that sort. And, by the way, we are using alfalfa honey on our table, day after day. I never ate any other honey that suited so well, and for so great a length of time. At present the outlook seems to be that alfalfa honey is destined to lead the world.—*Gleanings.*

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EDITORIAL NOTES.

During the month of April the weather was unusually warm for the season. May came in cold and blustering. During the first ten nights ice formed more or less thick, and the prospect for early queens was far from encouraging. However, we managed to overcome the elements, and to-day, May 10, we have as fine a lot of those golden Italian queens hatching in nursery cages as any one ever saw. Early in April preparations were made to rear queens and get them fertilized and ready to mail by May 20. Nothing will upset this arrangement except unfavorable weather. We have the queens and drones, and on May 20 a batch of queens will be mailed our customers. After June 10, we expect to have queens to ship by return mail.

THE GOLDEN CARNIOLANS.

These bees are now at work, and come up fully to our expectations. We find them very industrious, swift on the wing, very active and most wonderful workers.

If beautiful bees that combine all the desirable qualities are what is wanted by the beekeeping public, the golden Carniolans will fill the bill.

We guarantee these bees to be equal to the above description. If they are not, the money sent for them or other queens will be returned. See revised prices on another page.

SMALL HIVES.

We are still of the opinion that the small brood-chamber is far better than a large one. They have given such satisfaction in our apiary that in future only a 7-frame (L. size) will be used in the Bay State Apiary. There are hives in our yard that have 7 frames full of brood. Now what is to become of the young bees when they leave the cell? 'Tis a simple problem to solve. Why, section boxes will be placed on the hives and with this method of contraction the bees are actually forced to go up into them. When there, they will commence work on the foundation, and the first thing we shall know, the sections will be filled with honey. Now, suppose four more frames are added to the brood chamber, what would be the result? The bees that might be working in sections are loafing on those surplus combs of the large brood-chamber. A writer in the *Western Rural* says:—

For a while before swarming-time, a large brood-nest is needed—larger, at least, than is needed after the main harvest has come. As top-storing and tiering-up are now almost universally practised, and as bees work much more readily in sections that are over the brood, it is evident that a hive allowing vertical contraction is the one for "contractionists" to use.

If contraction is not to be practised, then there arises the question of what size shall be the brood-nest. Some plead for generous space that the queen may not be "cramped for room," as though this condition of affairs were very undesirable and unprofitable. Were queens expensive this plea would be worth consideration; but as the capital is in the combs, honey and hives rather than in the queens, the question as to which shall be kept employed at the expense of the other's idleness needs no argument. If the size of the brood-nest is to remain unchanged, then let it be of such capacity that an ordinarily prolific queen will fill it at the height of the breeding season. Let the size be less than this, rather than more. Eight Langstroth combs, or their equal, will furnish sufficient room. Many, in arguing for large hives, mention how much larger yields per colony are secured. True, but do they secure any more per comb? Beekeeping ought to be viewed in a broad light. The question is some-

thing like this: Here is an area of honey-producing flowers; how shall we secure the nectar with the least expenditure of capital and labor? Small hives enable us to secure a more complete filling of the combs with brood; consequently we have more workers for the combs. Small hives may cost a trifle more, in proportion to their size, than large hives, but as an offset there is the greater ease and quickness with which they may be handled.

Aside from a small brood-nest to secure a more complete filling of the combs with brood, or to lead to more rapid work in the sections, there may be mentioned the making of hives in such a manner that they may be inverted. The masses have not seemed to take kindly to inversions. Like many new things it was extravagantly praised; but it is far from valueless. Perhaps one reason why inversion is not more generally practised, is because it has been discovered that with a hive having a horizontally divisible brood chamber, the interchange of the parts accomplishes the same results as inversion.

We cannot agree with our friend that a large brood-chamber is needed at any time in the season.

A large brood nest does not mean a large colony by any means. In most cases just the reverse is the result. Bees winter far better on a few combs well filled with honey than they do on a large number in which there is a small amount of honey in each comb.

We have hardly known it to fail when finding a colony located on one side of the brood-chamber, or at one corner for winter, that did not die before spring. The stores would be eaten out, and the colony dead long before spring. This state of things cannot exist in the small brood-chamber. The cluster is always within easy reach of their stores.

THE HONEY SEASON OF 1891.

The honey harvest for 1891 is close at hand. Let all take advantage of it and secure the largest possible amount. Get the sections on the hives early and as they are being filled, add more sections as the season advances. On cool nights contract the entrance of even the largest colony to one inch space, and if need be, cover the hive with blankets or anything that will keep up the temperature of the interior of the hive. Of course this cannot be done in apiaries where hundreds of colonies are kept, but the small beekeeper can practise it. The entrance can be contracted even in large apiaries. This method has been practised for years in our apiary. A few days ago, two queen nurseries of 21 cages, each cage having a queen cell in it, were inserted in the brood chamber of a strong colony. The nights were cool and to make sure the cells should hatch, the hive was blanketed as above stated. On examination later on, the cells in the outer cages had hatched all right.

By keeping the bees at work in the sections at night, a much larger amount of honey will be secured. On cool nights bees in single-wall hives desert the sections and do not get at work in them till about ten o'clock the next day, and not then unless the weather is warm and pleasant. This is another point in favor of the double-wall hive. They serve as good purpose in the early flow of honey as they do in winter in protecting the bees from extreme cold. And still further, the 7-or 8-frame hive should not be forgotten here. Bees working in sections in 8-frame hives do not desert the sections in cool weather as they do in 10-frame hives. All these things, though they do not seem of much importance, really count in the end. As stated in a quotation on another page, "If any person expects to realize a large income from his bees and never look after them. etc." It does pay to look after them, providing the looking after is done at the right time.

THE SWARM HIVERS.

Especial attention is called to the reports (found on another page) just received from two women beekeepers in the state of Texas. Mrs. Sherman is well known to all the readers of the API; Mrs.

Jennie Atchley is known as a writer on bee culture and probably keeps more colonies and does a larger bee supply business than any other woman engaged in beekeeping.

One word here about the trap and swarmer. If the beekeeper is absent during the day the automatic swarmer is the thing to use. If present in his apiary during swarming time, the trap is rather the best for this reason: When a swarm issues and the beekeeper desires to save and hive them, it is the easiest thing in the world to do. When the queen is seen in the trap all that is necessary to hive them, or rather to make the bees hive themselves, just place the trap on the new hive near the old one and the bees will hive themselves. We will stake our reputation on the statement that not one swarm in 1000 will fail to hive themselves by this method.

NO CARNIOLAN BEES TILL ABOUT JUNE 5.

Will say to those who have ordered Carniolan queens, that we cannot ship them till above date as it was impossible to induce the bees to rear drones.

The man who has inserted an adv. in a bee publication concerning Carniolan bees is the same man who last year sent us the meanest black queens for Carniolans that any dealer ever sent out. When we received the queens, we at once informed him that his queens looked like black ones, and were inferior in appearance. The queens were sent us for pure Carniolans, and this same man says that pure Carniolan bees are gray in color. Notwithstanding his statement, more than half the bees from these *pure* Carniolan queens we received from him had yellow bands.

This same man says there are no yellow Carniolan bees in existence, yet a man in Austria is advertising them, and several queens are expected from him in June.

Prof. A. J. Cook has just issued another edition of his *Beekeepers' Guide* (the 16th thousand). It contains 461 pages, and is nicely printed and bound, and the price is now reduced to one dollar. Such a full and complete work, at such a low price, should be a very popular one, and the sales should be very large. It is thoroughly scientific and practical, and fully abreast of the times, in our ever-advancing pursuit.—*A. B. J.*

A copy of the above book is on our desk, and we endorse every word Bro. Newman says of it. The *Beekeepers' Guide* and the API one year will be mailed for $1.25.

Winter cases for hives have been endorsed quite freely of late, but they are not "a new idea." Henry Alley claims to have had a patent on them some 19 years ago, and has used them in the Bay State Apiary ever since that time. He says he is glad that Mother Earth did not claim him before some of his ideas in bee-culture were adopted. In this, Brother Alley is ahead of many worthy men, whose ideas were not put to practical use until they were dead.—*A. B. J., May 7.*

THE SWARMER IN CANADA.

We have made arrangements with E. L. Gould & Co., Brantford, Ont., Canada, for the sale of the Swarmer in Canada. Send your orders to them.

CARTOONS FOR ONE-POUND SECTIONS.

On May 12, we had the pleasure of seeing Mr. A. O. Crawford of So. Weymouth, Mass., manufacture cartoons. His factory has facilities for making 15000 cartoons per day. The work and stock are first-class.

While at Mr. Crawford's we purchased fourteen of the strongest colonies of Italian bees to be found in New England. There were eleven frames of brood in some of the hives. The queens in these colonies were from the Bay State Apiary.

When J. B. Mason left Mechanic Falls, Me., on Dec. 22, he allured away a neighbor's wife, Mrs. Cotton. They went to Los Angeles, Cal., and a letter from her appears in last week's *Boston Herald*, appealing to her husband for forgiveness, saying that she neither expected nor deserved his love. Mrs. Mason and the forsaken family have appealed to the courts to dispose of the property left by the dishonorable husband and father. He was editor of the *Bee Keeper's Advance*, but it did not "advance" in his hands. He dragged it down to death.—*A. B. J. May* 7.

We have been posted in J. B. Mason's career, but did not care to mention the scandal in the API. Mason was a man we never could like. He was too pious for us. While we have the greatest respect for a person who conducts himself in a Christian-like manner, we have only disgust for such fellows as J. B. M. represents.

SHIPPING HONEY.

Henry Segelken, in a paper before the N. Y. State Beekeepers' Association, said: The shipping of comb honey should be by freight altogether. Some beekeepers still seem to think that it must be sent by express only, believing it to carry safer. This is entirely wrong. Honey is carried just as safe, if not safer, by freight; at least this has been our experience. Owing to the short crop last season we received a large number of small shipments, ranging from ten to fifty crates each, by freight, and we had but two or three lots which arrived somewhat broken down, and in one case the shipper wrote us afterwards that the honey had already leaked out when he took it to the depot. We re-ship in all-sized lots often in single crates, and very seldom have a complaint. So far as the responsibility is concerned, all carriers—railroads, steamboats and express companies—will take comb-honey only at owner's risk, and will not listen to any claim if the honey has been broken down while in transit. Why then pay the express companies three times the rate of freight lines? We would advise shippers to load the honey in the cars themselves, properly protected. If this is done they may feel sure that the honey will arrive at its destination in good order under ordinary circumstances.

Another point is that honey should be shipped only in the original crates. We received one lot of honey from Central New York this season, where the shipper had gone to work and crated six to eight original crates into one large crate. This, of course, was too heavy a package to be handled carefully, and no doubt received rather rough handling. The result was that we received the honey all broken down, and the shipper was out from four to six cents per pound on it. A sad lesson, indeed!

Last, but not least, "What is the right time to ship comb-honey to market?" We have always advised early shipping, say during September and the first part of October. Our experience teaches us that the early shippers obtain best prices and get quickest returns, be the crop large or short. In all our experience we have never known the market to advance during November and December, but it usually declines as the season passes along.—*Exchange.*

If any person expects to realize a large income from his bees and never look after their condition (simply hive them and put on the sections), he will find himself greatly mistaken. How many that read this know the exact condition of their bees at all times? If you do not, my friend, you are not caring for them as well as you would for your horse or cow, neither can you expect any more profit from them than you would from a cow or horse if you never looked after them. Beekeeping only pays when our pets are properly looked after, and if any one cannot spend the amount of time on them which they require, he had better keep out of the business, for sooner or later he will turn away from it in disgust.—*Exchange.*

SPECIAL NOTICE.

To meet the popular demand for the APICULTURIST and premium queen, the same terms as given in the API the last six years will be continued through the year 1891, as follows: The APICULTURIST one year and a select queen from our best strain of Italian, $1.50. APICULTURIST and select golden Carniolan queen, $2.25. APICULTURIST and automatic swarmer by mail, $1.50.

Any subscriber, whether old or new, can get one select Italian queen for 75 cents.

After June 10, 1891, Italian queens will be mailed at the following rates:

1	warranted queen, ...	$1.25.
3	" "	3.50.
12	" "	12.00.

Tested queens, each, $2.00. Select tested, each, $3.00.

After the above date we shall be prepared to ship queens by return mail.

Every queen guaranteed to be perfect and satisfactory in every respect, or other queens will be sent.

THE SELF-HIVER.

FIRST REPORTS FOR 1891.

On Saturday, March 28, 1891, I placed one of Mr. Alley's self-hivers at the entrance of a hive from which I knew the bees would swarm in a few days; near this hive was one prepared to receive the new swarm when it issued. On Sunday afternoon about four o'clock, in walking through the apiary, I saw the bees at work in the new hive. They had swarmed and hived themselves and were working nicely, without any assistance whatever on my part, except to make the necessary preparation for them. This self-hiver will certainly be a wonderful help to beekeepers.

By the use of the drone-trap and queen-cage combined, which was invented by the same gentleman, I secured 48 swarms out of 49, in 1888, without so much as having to cut a single twig in hiving them.

MRS. SALLIE E. SHERMAN, *Salado, Bell County, Texas.*

FRIEND ALLEY: About all I have got time to say is the swarmer gets there OK. JENNY ATCHLEY,

May 1, 1891. *Farmersville, Texas.*

One hiver by mail and the APICULTURIST from June 1, 1891, to July 1, 1892, sent for $1.50. We are having a large call for farm, township and county rights to manufacture the swarmer. Any beekeeper will find it a good investment to purchase the right for the county in which he lives. Send for a sample hiver and if it suits you send $4 00 more and get an individual right and manufacture your own hivers. We can supply you with any parts of the hiver.

I WILL PAY $10 FOR EVERY SWARM LOST WHERE THE HIVER IS USED.

Sample Hiver by mail, $1.00. Wholesale prices given on application.

Address HENRY ALLEY, WENHAM, ESSEX CO., MASS.

THE AMERICAN APICULTURIST.

A Journal Devoted to Practical Beekeeping.

VOL. IX. JULY, 1891. No. 7.

FOREIGN NOTES.

ARE BEES NATIVES OF A WARM CLIMATE?

One of the mistakes of modern beekeepers is the saying, that bees are natives of a warm climate. Who was the first one to say so, I do not know, but nearly every day we can hear or read this fable here in the United States as well as in the old country, but I have never seen any proof for it. This question is important because a number of winter theories are based on this, so it will be of interest to look the matter over.

If we take into consideration the present geographical extension of the honey-bee (*Apis mellifica*), we see that this bee nowhere in a tropic climate is native; where we find it, we know it is imported by man. In tropic climates we find some other species of bees. This may prove very little, but it is striking if we see that in such countries the honey bee now is not native at all.

We know that Germany was a cold and rough country before she got in communication with Greece and Roman civilization. The oldest notice from Germany about bees we receive from Pythias, living at the time of Alexander the Great (about 330 B. C).

He says that amber merchants found honey on the northern coast of Germany. Later we read in *Plinius* (Hist. Nat. IX, 18), that after the battle of Arbalo in northwestern Germany (about 12 B. C.) a bee-swarm alighted in the camp of the Romans. Herodotus (at 440 B. C.) says that north of the Danube river no invasion into that country was possible on account of the great number of honey bees. It may be said, nevertheless, that the bees may have emigrated there from a warmer climate. But we see that the honey-bees of that time must be especially fitted for this rough climate, if we take into consideration that the old Germans hardly knew anything of scientific wintering, of a pollen theory or any other theory. I am sure those old forefathers of ours were bee hunters and understood not much more than to cut a bee tree, to eat the honey, to make meat out of it, and were masters in drinking it.

But we can prove that the honey bee was in this country many thousands of years before men were there. Near Peningen, a small village in Baden, Germany, is found a petrified honey-bee. The rock in which it was found belongs to the Miocene, the youngest part of the Tertiary formation. No trace of a human being is found before the Diluvian, so it is sure and sufficient proof that bees were natives of Germany long before man. This petrified bee was found about thirty years ago.

Besides this we have some other proofs in the habits and anatomy of the bee that hardly any other animal is more specially fitted to stand a severe winter. While a single bee is hardly able to raise the temperature of its body about one degree over that of the surrounding air, we see that a colony of bees by a temperature of 20° or 10° F. outside can keep up 60° or 70° F. or more inside of the cluster. To make this possible the main winter food (honey) is already pre-

pared in summer-time; it is digested and stored for further use, so it can be assimilated at once and changed to heat. We do not know any other animal with a similar power. If we add to this that the honey is cappe l to keep out the moisture, that the surface of pollen likewise is polished to keep it for use in winter and early spring, we shall hardly find another animal which instinctively makes so much preparation for a long winter.

Further, the anatomy of the bee shows that this animal is especially created for a long winter. We know that bees are confined for five or six months (in Siberia even seven months) to the hive. This is possible only because the bee can accumulate their excrements for so long a time in the large intestine. Practice teaches that they can stand this long confinement as long as they remain healthy. All who have examined the alimentary canal of bees will never doubt that this part of the intestine is expressly fitted, created or developed for this purpose.

If we, by our scientific and rational methods of beekeeping, cannot winter our bees without more or less loss, it is a proof that our management or our theories are not correct. So much is sure: that many thousands of years, bees lived and prospered, wintered, swarmed and gathered honey in a cold climate and without any help (?) of a scientific beekeeper.

Another proof that bees are natives of a climate with cold winters is the fact that a colony of bees breed in winter time and do this the more the colder the temperature. If a severe temperature in January or February causes a great consumption of honey, we shall find more capped healthy brood than later, after the bees have had a cleansing flight. Whoever examined a colony in such circumstances will never doubt this fact. An insect, which in severe weather can breed and can nurse healthy young ones and for this purpose can raise the temperature fifty or sixty degrees, will remain healthy, using no other food than that stored, disdaining even water, without discharging fæces, is surely created for a cold climate.

We again come to this conclusion if we observe the habits of *a colony* of bees. A single bee is a feeble thing, but a single bee does not winter. A single bee is in fact only a part of an organism and the colony of bees is the animal proper. In this respect alone we could write many articles. If you want to know how insect colonies act which are created for a tropical climate let me tell you how the so-called stingless bees do, the melliponæ or trichoptera, and you will find out the difference.

L. STACHELHAUSEN.

Selma, Texas.

MORE ABOUT BIG BEES.

DR. MILLER, W. Z. HUTCHINSON AND MR. CHESHIRE REMEMBERED

Dr. Miller says on page 12, "queens of medium size are generally the best. They have proven so with me." He admits that he uses old combs all the time.

That's right; as long as you use old combs stick to your medium or small size queens; the *older* the combs the smaller you will find your queens. I prefer the *large*, handsome queens on new combs and the result in a crop of honey, is, with me, better by nearly two to one. Again, on page 83, Dr. M. says, "I cannot see how the size of worker cells can have any effect on the queen's progeny." What kind of a doctor are you? The comb cells are the *wombs* in which the infant bees develop previous to birth—by its repeated use, each time leaving a lining that is *never* taken out by the bees, causing it to become cramped in size. To illustrate: not long since I learned, or think I learned, this matter. I had a colony that was not doing well. I obtained from Mr. Alley one of his *best* queens from the $100 queen; received and introduced her during June, 1890, into that hive on those old combs; her young

were small in size and they did not gather honey enough to winter during the season of 1890. This last March ('91), I took those old combs away, gave her colony a set of combs made by a young swarm last summer on starters an inch wide and to-day, June 5, 1891, that colony is the best one I ever had or saw. The workers are the largest; many of them have to squeeze to pass the slots in the drone-traps. I keep two of the traps on my hives, full width of the hive for an entrance and it ought to be still larger for the next twenty days if the honey flow continues. I have two section cases on, holding forty sections each, and the top one is very near complete. I use Falconer's Chautauqua hive.

Again the Dr. says on page 12, and Mr. Hutchinson in the *Beekeepers' Review* seem to be greatly alarmed at the wreck we are about to make of the "floral kingdom" if we tamper with the size of the honey bee. If such things as "Cheshire" predicts are to come to pass if we should *enlarge a few bees*, what, oh! what would be the result if we continue to make the bees *smaller?* Please note the prediction in the *Review* for May. A *perfect* man 6 feet! should another man 18 feet *built in proportion, every inch a man*, the latter would be *just able to stand!* Such *Rot!* I cut the following from the *Boston Advertiser:*

"Prince George of Greece, who received the thanks of the Czar for rescuing his cousin, the Czarowitz, from the mad Japanese, is a young Hercules. He is almost 6 ft. 4 in. tall, and is built in proportion. His natural strength has been increased by his service in the navy. While in the Danish navy he was the idol of the sailors. He delighted in measuring his strength with the strongest tars. He can climb a mast barefooted as well as the best sailor and is a scientific boxer."

Now can anyone produce a *Tom Thumb* that can hold a candle to this Prince George? I never expect to see a man 18 feet tall, but if in the course of evolution, God so ordains that there shall be such men, they will be perfect in all parts. God never makes mistakes, and the "Cheshires" may figure and figure, the world will move on just the same.

Brother Hutchinson of the *Review* heads his article: "Our bees are big enough," and then gives us some of Cheshire's nonsense. Tell us something you know yourself, Brother H. The time is not far back when you thought your book on "How to produce Comb Honey" was big enough. I did too, and from its pages I learned how to produce it more from that little twenty-five cent book, than from all others. Now I see by your ad. it's not "big enough" by at least five or six times and the "Advanced Bee Culture" is coming out, and I am going to have one, for I don't believe "Cheshire's" rule will apply to the creature of Hutchinson's brains anymore than to the rest of living creatures.

Next season (if I live), I intend to try a plan of raising from one of my best queens special drones to mate the young queens, from a hive prepared with an abundance of *new drone comb*. I hope the result of that selection and crossing may be a bee (worker) too large to pass through the slot of an Alley drone-trap; if so, then shall look to see that bee working the red clover.

Wellesley Hills. C. W. SMITH.

BEES AND BEE PLANTS.

The busy bees, says the *American Agriculturist*, have worked their way into the good graces of the masses, and their sweet product is welcome upon the table everywhere. The apiary is not unknown to many counties of the older States, and in many townships there are several. The subject is so important that the leading farm journals devote space regularly to the subject. If all this is so it seems about time to begin to consider the honey crop as one to be planned for as much as for sorghum or maple sugar—for maple orchards planted for tapping are not rare nowadays. Some plants are preëminently honey or nectar producers, and it

may be possible to grow these as a crop for the sake of furnishing a pasture for the bees. Prof. Cook claims that the greatest hindrance to beekeeping is not "winter killing," or "foul brood," but lack of nectar. It is possible to depend upon wild flowers for a large share of the crop, and provide a pasture at the times when there would otherwise be a dearth of nectar. There is a species of Cleome known as the Rocky Mountain bee plant that has been tested somewhat. Then there is the Chapman honey plant (*Echinops*). A mint (*Melissa*) has also been employed. The right plant may not yet have been found. Those experimenting in the apiary are doing a good work along many lines, and in time the bee pasture will be a thing to be admired for its beauty and its profit as well.

QUEEN-EXCLUDING HONEY-BOARDS.

A writer in *Country Gentleman* says: With the majority of frames in use, bees build little bits of combs between the top bars of the frames, and extending the combs upward, connect them with the cover of the hive, or the bottoms of a case of sections, or whatever is next above the tops of the frames. These little bits of combs are called brace-combs, or burr-combs. It is very unpleasant, unprofitable and untidy to lift off a case of sections, and in so doing pull apart a network of combs that connect the bottoms of sections with the tops of the brood frames. The honey drips and daubs about, and attracts robbers, if there are any to attract. The bits of comb must be scraped from the bottoms of the sections, and the muss cleaned up as best it may be.

The beekeeping fraternity is, I believe, indebted to Mr. James Heddon for the wooden honey-board, which practically does away with all trouble from brace-combs. This honey-board is simply a series of slats fastened to a frame as large as the top of the hive, and placed over the brood-nest. These slats are about five-sixteenths of an inch thick, placed three-eighths of an inch apart, and of such width and so arranged that each opening between them comes exactly over the centre of the top-bar of a brood-frame below. In other words, the slats break joints with the top-bars of the frames below. As the tops of the frames are three eighths of an inch below the level of the top of the hives, there is a three-eighths inch space between the top of the frames and the bottom of the honey-board. The outside rim or frame work of the honey-board is three-eighths of an inch thicker than the slats; thus the surplus case is raised three-eighths of an inch above the slats of the honey-board. In short, the honey-board is a series of slats three-eighths of an inch apart, placed between the brood-nest and the supers, with a "bee space" both above and below the slats. In the space below, between the slats and the brood-nest, the bees build brace-combs just the same as ever; but, for some reason, the space above is almost always left free from the disagreeable brace-combs. A case of sections can be lifted off as clean and free from daub as when placed upon the hive.

I once tried to make these slatted honey-boards queen-excluding by placing the slats exactly five thirty-seconds of an inch apart. So far as excluding the queen from the supers was concerned, they were a success, the greatest drawback being the fact that when the slats were placed so close together, bees filled the spaces between them with hard wax. It is also some trouble to place the slats exactly five thirty-seconds of an inch apart, and fasten them in such a manner that they will remain exactly that distance apart. I next tried to make a wood queen-excluder by substituting a thin board (three-sixteenths of an inch) for the slats, and then perforating it with a small circular exactly five thirty-seconds of an inch in thickness. Such excluders worked better, owing, I think, to their being

thinner; still, the bees plugged the perforations to such an extent that it became necessary to clean out the hard wax each spring.

The G. B. Lewis Co. of Watertown, Wis., is now making an all-wood queen-excluder similar to this, the only difference being that the perforations are made across the grain. If some enterprising manufacturer will invent a machine to countersink the openings, that is, chamfer off the wood around the opening until the edges are only about one-sixteenth of an inch in thickness, I believe that in this manner an all wood queen-excluder could be made a success. It is my opinion that across the grain is the proper direction in which to make the perforations. The edges would be less likely to be injured or to be gnawed by the bees.

At present, the best queen-excluding honey-board is the wood zinc. It is simply the Heddon slatted honey-board with saw kerfs in the edges of the slats, and strips of perforated zinc slit into the kerfs, between the slats. To Dr. G. S. Tinker belongs the honor of having been the first to introduce strips of perforated metal, in this peculiar manner, between the slats of the Heddon honey-board.

Whole sheets of zinc have been used as honey boards. The greatest objection seems to be that such large sheets are lacking in rigidity. They are likely to sag, or bend, or kink, thus destroying the perfection of the bee-spaces. If a sheet sags, the space above becomes so large that there is a likelihood of comb being built therein; while the space below becomes so small that propolis is placed between the zinc and the tops of the brood-frames. The wood-zinc honey-board is free from this defect.

During the last year or two there has been an effort to do away with honey-boards. It has been found that wide, deep top-bars, accurately spaced, have, at least, a great tendency to reduce the building of brace-combs. The spaces between the top-bars should be as near five-sixteenths of an inch as is practicable. If greater than this, the danger of comb-building is greatly increased; if less, there is a tendency to plug the spaces with hard wax—not comb, but hard, solid wax. With the ordinary hanging, open-end frame it is not practicable to space the frames sufficiently accurate to prevent the brace-comb nuisance; that is, not unless some spacing device is used. Closed-end frames are the best adapted to bring about the necessary accuracy of spacing.

When there is any necessity for the use of a queen-excluder, the only practical way in which it can be used is in the shape of a honey-board. In raising comb honey, there is little need of a queen-excluder over an old-established colony; but when a swarm is hived in a contracted brood-chamber, and given the supers from the old hive, a queen-excluder is almost a necessity. In raising extracted honey, queen-excluders are a great convenience. If they are not used, the operator must always be on the lookout for brood in the extracting supers. Some combs will be found containing only a little brood; yet they cannot be extracted without throwing out some of the brood into the honey. Some beekeepers, when they find brood in the upper story, exchange the combs for the outside combs of the lower story, if they can find any such without brood, but this takes time. To successfully conduct an apiary, the fixtures and methods should be such that the work will move along smoothly and in a systematic manner, without any "hitches." There is also another point to be considered in connection with the use of queen-excluders when raising extracted honey, and that is the freeing of the supers by the use of "bee-escapes." If the super contains several combs of brood and the queen, it is doubtful if the bees could be made to desert it by the use of the escape. If they did desert it, then something would have to be done with the brood when it was discovered. In short, advanced bee-culture has divided the bee-hive into

two distinct apartments — brood and surplus—and unless this division can be maintained, many profitable plans must be relinquished. The queen-excluding honey-board enables the beekeeper to thus set up a boundary, beyond which the brood cannot go.—*Western Rural.*

BEE NOTES.

See that your colonies have good queens. This is a good month to supersede inferior queens.

It is not advisable to form new colonies after Aug. 1. Make them up in July and furnish each with a good queen and the bees will winter well.

Remove surplus honey from the hives as soon as well capped. This will preserve its snow-white color. The longer it is left on the hive the darker it will be, as the bees find some way to discolor the capping.

When bees swarm out of season it is generally caused by superseding the queen. If there is trouble with the queen the bees commence to construct cells and when capped usually a swarm issues with the old queen. In some cases the young queen as soon as she hatches is allowed to destroy the old one, when no swarm will issue.

The only sure way to prevent loss of swarms is to keep a drone-and-queen trap on the hive during the warm months. There cannot be any objection to doing this as the trap does not in the least interfere with the working of the colony.

Then again, the trap destroys the useless drones and there is a saving of stores to the colony.

Bees sometimes are forced to swarm by the heat. After the honey harvest the hives should have a large entrance and shaded. The large entrance is the best prevention of swarming and furnishes the best ventilation. There is not the least danger of any large colony being robbed by having a large entrance. Robbing does not usually happen in an apiary that is not much meddled with.

IT IS THE SHAKING PALSY.

Norwich, June 2, 1891.

FRIEND ALLEY :— I am a subscriber to API but I am in trouble and want to know if you can help me out. I have a disease among my bees and I would like to know if there is any help for it. The bees that are affected by it look shiny as though they had been dipped in oil and the other bees try to carry them out of the hive. I have three swarms very bad off with it. In the worst one of the three the bees die off faster than they hatch, so they are decreasing instead of increasing.

I have had colonies before that had a few such bees but not enough to cause any uneasiness. One of the colonies contains the best queen I have in the yard, the one I intended to raise queens from, but I am afraid to raise queens from her under the circumstances for fear of the disease. I know it is not foul brood for I have had that to my sorrow, but am all free from it now. The brood does not appear to be affected by the disease ; it is only the old bees. I would like to know if it is catching and whether it is safe to use the combs and hives or not.

I intended to send for a queen and some of your "Drone-and-Queen traps" but have waited to see if the disease is going to spread through the whole yard. It may be the "nameless disease" you speak of in the API. If so, will you please write and tell me how much salt to put in the honey and how much to feed, etc. If you are sure that I can cure this disease so it won't spread through the whole yard you may put my name down for a tested queen from your two-hundred dollar Italian queen and I will send the $2.00 on getting your reply. Your book on raising queens can't be beat.

Albert Cook, Norwich, N. Y.

It is the shaking palsy. Apply salt and water as recommended in the back issues of the API.—ED.]

AN ESSAY.

BY E. L. PRATT,

NORTH BEVERLY, MASS.

Read at a meeting of New England Beekeepers held in Boston in January, 1891.

There are a hundred and one different styles of bee hives on the New England Market, all claiming to be the best. One is obliged to use his wits in selecting a hive best adapted to his needs. A perfect bee hive should be cheap light in weight, and durable. Easy of manipulation, and should hold movcable frames of standard Langstroth size. It should not be too large or too small, but of a size best adapted for securing all of the honey in neat, salable shape.

For either box or extracted honey, the 8-frame size is about right, though we have been very successful with seven Langstroth frames to the hive. It is natural for bees to store honey over the brood, therefore all honey receptacles should be adjustible to the top and directly over the frames, so arranged that two or more can be tiered up according to the amount of honey being gathered.

The standard box is of one piece and four and one-quarter inches square. Any other size is a drug on the market in the majority of cases. The boxes should be so arranged as to be interchangeable, either singly or in rows, as many times bees are loath to work in the outside boxes or those coming close to the ends. By jumping the unfilled boxes to the centre all are worked out at once, allowing us to remove the honey in cases rather than by the single box. If the hive sets perfectly level from side to side and wide boxes are used, separators are not really necessary. But hives are apt to settle, or we may wish to use narrow boxes. Separators afford the safest method of securing perfectly flat combs inside each box so necessary in long shipment to distant markets, or the carting about in a retail trade. Tin, glass, wire and such materials are nuisances about any hive.

There should be some simple means of clamping the sections tightly together to avoid the deposit of large quantities of glue, gathered by the bees for the purpose of stopping cracks. By compressing the sections there are no cracks for the bees to stop, and we do not need to spend valuable time in scraping off an unnecessary deposit of useless matter. The cover should be a simple, flat, well cleated board of light weight and should be kept well painted. All the joints should be square; beveled joints, either at the edges or corners, are decidedly passé.

By using top bars of good width and thickness, there is no need of honey-boards. In fact, we never could see the use of them any way, unless they were queen-excluding, and for a queen-excluder there is nothing so good as a solid sheet of metal well bound. All appendages in the shape of porticoes, doors, sliding blocks, hooks, buttons and the like are left of a perfect hive.

Here in New England a hive is not fit to winter out of doors unless it has an outside or winter case to admit of packing with some absorbent material, such as cut hay, straw or chaff. A good sized cushion should be made of this material to spread over the frames and entirely cover the top of the hive. There should be no packing at the sides until breeding commences in spring, as the heat is not sufficient to throw off the moisture until then. Ventilating holes should be provided at the ends of the winter case near the top to carry off all moisture as fast as taken from the cluster. In this lies the secret of successful outdoor wintering of bees. Over all comes a tight, well-painted winter roof, which can be screwed down and left until the flowers bloom in the spring. There should be but one entrance and that low down so that the bees enter under the combs Taree-cornered blocks for contracting the entrance have never been improved upon.

There are several minor points that are necessary to a perfect beehive. The space under the frames should be one-half of an inch, and those at the ends of hanging frames are three-sixteenths, not over one-quarter. One-fourth inch scant is considered to be the correct space between the top bars and boxes to avoid the deposit of burr comb. Brood combs spaced 1 3-8 inches from centre to centre will do away with all brace combs. If closed end frames are used, they should be compressed the same as the boxes to avoid glueing.

Top bars to frames give better satisfaction when three-quarters of an inch thick and one and one-eighth wide. Each bar can be split through the middle for convenience in fixing foundation. If good foundation is used there is no need of wiring frames. There should be a bee space below the combs as well as above for convenience in tiering up bodies for extracted honey. Extracted honey can be best secured in the ordinary sized frame. Therefore, our hives can be converted into hives for extracted honey by simply placing one body above another with an excluder between.

The great object in successful bee-keeping is to do away with useless furniture. All parts should be interchangeable and adapted to as many uses as possible. For instance: The ordinary supershell can be made deep enough to accommodate half-depth frames for the purpose of hiving swarms and securing large quantities of box honey, or, as some prefer, for extracting.

The hive I have explained is decidedly an all purpose hive and is readily adapted to the needs of any beekeeper. If you prefer hanging frames and a single wall hive, the one I have been talking about is the hive to select.

If you decide to change from hanging frame to closed end, a new set of brood frames is all that is necessary. If you think you will have better success in wintering in a double hive, an outside

case can be added for a small amount. If you wish to produce some extracted honey with comb honey, simply buy a set of shallow frames to fit the super, or two bodies can be tiered up. There are many points of value in such a hive, and experience in practise will bring them to one's notice. I need not say that it pays to paint all wood parts exposed to weather.

Honey Producing.

Many of us do not work our bees to the best advantage, and I shall lay down a few rules that may be of value to some, perhaps old to others. In the production of comb honey it is necessary first to secure a large working force by the opening of white clover. or by the 15th of June, and I know of no simpler manner of securing this large force than by using the double-wall hive and the closed end frame.

If we have our hive well filled with stores in the fall, no stimulative feeding will be necessary, and, as skunk cabbage, willow and maple yield polen so early, it is unnecessary to dabble with any sort of artificial pollen. But there is one thing very essential about this time and that is to be sure to provide stimulative feed during the cold and wet season that generally comes on about the time fruit bloom is beginning to fail, as it is quite important that the queen be fed liberally in order for her to deposit the required number of eggs a day. Just before white clover opens, the sections that have previously been provided with a good article of thin foundation should be adjusted to the colonies in the strongest condition. It does not pay to monkey with the very weak ones only so far as to see that they have a good queen and are doing well. Such colonies should be kept in the frames and built up for the fall flow or for stock another season. It is a good plan to buy young queens from some reliable breeder and introduce to all such colonies during clover bloom.

A great many bee-keepers experience trouble in getting their bees started in the sections.

There are always one or two colonies that get into the boxes at once and have quite a start made before all the others. Simply shift a row of started sections with a middle row of one not started, bees and all. Continue this practice until all have at least one row of started boxes. Another way is to tier two cases of sections above the strongest colonies, leaving out the center row of boxes in each case and hang a frame of brood in all stages in their places. Leave thus until a good start is made, when a row of started boxes can be placed in the centre of each case, bees and all. If they refuse to work after this, it is very evident that they intend to swarm, when every effort should be made to encourage them to do so. Disturb them as little as possible and feed a little during unpleasant weather. Adjust a trap to the entrance and prepare a new hive for each, with starters in the frames not over two inches wide. Never hive swarms onto full sheets of foundation or drawn comb, or you will be the loser rather than the gainer. Some competent person should be by the bees during swarming time. When the swarm issues, examine the trap for the queen. When found, remove the trap and adjust it to the front of the new hive and place it close beside the parent colony. Leave it until the swarm returns, which it will do in a few minutes, hiving itself as nice as you please. After the swarm is nicely settled in and on the hive, it can be placed where it is to stand permanently and the queen allowed to run in among the bees. It is safer to wait until quite late in the afternoon before the queen is released. The case of started sections should be removed from the old hive and placed onto the swarm. If these bees do not show you comb honey it is because there is no honey in the field. In a few days the parent colony will have become strong enough to take a new case of sections.

To guard against after-swarming, re-adjust the trap to the old colony, catch and kill the queens as fast as they come off with a swarm. Then the trap should be removed to allow the last young queen a wedding flight. If increase is not desired the new hive can be placed on the old stand and all the remaining bees shaken off the combs in front of the new hive, at the end of the 8th day. The brood remaining can be distributed among the weak colonies or tiered over some colony that can care for it.

A good cure for a sulky colony is to take all its brood away and give full sheets of foundation. When all swarming is over with, look the section cases over and jump the filled boxes to the outside, and bring those just started on to the centre. In a few days more, a new set can be placed under the filled cases on the strongest colonies. Those slow about filling up had better be kept in one case and new boxes added by rows in the center, and gradually tapered down until the close of the clover season.

As soon as the clover season has passed, all the honey remaining on the hives should come off and the brood frames be examined. Wherever honey is found in any quantity, it should be uncapped, extracted, and the empty combs returned to the hives from whence they came. We have found that it does not pay to leave honey in the hives, after clover fails. It is better to extract it and feed it back when necessary, as the bees will do just as well, if not better, without it, for they will make their own living during pleasant weather. If left on the hive they will use it for brood rearing out of season and thus consume it needlessly. If needed for winter stores, we have it ready to feed back at any time.

Extracted Honey.

The simplest and best method of producing extracted honey, that I know of, is as follows:

In the spring proceed the same as for comb honey until the colonies are of good strength and working well. Just as soon as the flow from white clover commences (or a little before if you can judge it closely), remove the comb the queen is on and place it, bees, queen, brood and all, in an empty body. Fill the remaining spaces with good, clean brood combs, and set it onto the bottom board. Adjust a queen excluder and place the body containing all the remaining brood on top of that containing the queen and the one sheet of brood. Fill the empty space left in the top chamber with an empty comb. Close the hive and let them work. If examined in about ten days the brood in the upper half will be found well hatched out and honey in its place, while the lower frames will be heavily brooded.

As soon as the honey in the top half is about two thirds capped, remove the combs and extract the honey. Return all the empty combs but one and repeat the operation of shifting the queen. Proceed in this manner the entire season, never attempting to extract until all the brood has hatched out of the upper story. If you do not find this method the simplest and best you have ever tried, then I shall lose my guess.

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EDITORIAL NOTES.

GOLDEN CARNIOLAN BEES.

How many of the readers of the API have read that the editor and Mr. E. L. Pratt are two big swindlers? If you want to know our record, just waste your time in reading our history in that little, mean, two cent publication that styles itself a bee-paper. The only reply that would seem to fit the charges made against us, is, " let the little dogs bark." They are now having their day. When the editor of a publication can find nothing but personal abuse with which to fill his paper, he is pretty hard up for copy. The articles above referred to were offered the editor of a respectable bee-publication and were declined. They were welcomed by a man who has a strong desire to injure two of his friends. Were we guilty of ever having done the editor in question any mean act, he might have some excuse for making use of the lying, scandalous and contemptibly mean copy he did. No fair-minded man, nor one who has any respect for himself, his paper or his readers, would make use of such bosh.

Our only crime is that we have been enterprising and have developed a valuable strain of bees from a worthless race. Some people make it a practice to throw every obstacle in the way of enterprising men. We are as badly abused as Father Langstroth has been. His only crime was the invention of the best principle applied to bee-hives.

Let those fellows who continue to stick to it that there are no such bees as *golden* Carniolans, vent their spleen through the dirty sheet. One thing is certain, very few beekeepers will ever see it. The paper has not (in our opinion) twenty-five subscribers and probably never will have. It cannot damage any one more than its editor. If its readers can find any information on bees in the issue referred to and are pleased, they must be a queer set of subscribers.

Well, all the same, we have a strain of bees that are much handsomer than the golden Italians, and a strain that possesses all the good traits of the dark Carniolans. As no swarms have issued from our golden Carniolan colonies, we think that worst of all trait in any race of bees has been bred out. This strain of bees has not one particle of Italian blood in them. We bred them up straight from the dark Carniolan race. We are receiving orders for them by every mail, and, although the price is $2 each, yet beekeepers do not care for that if they can get a superior strain of bees. We guarantee these bees to be just as represented. If they are not, don't fail to make your complaint to the API.

Do you know why those fellows who have stamped us as frauds, call us such pet names? Well, 'tis plain enough. Beekeepers who want Carniolan bees and queens, send their orders here as they know they will get just what they pay for. They know that a mean, worthless black queen will not be sent them for a *pure* Carniolan. Who cares to have those dirty black bees in his apiary that have but one trait, and that is swarming to death? Introduce the beautiful golden Carniolan queens, and thus stock your apiary with the handsomest, the most industrious as well as the gentlest strain of bees in the world. Take no stock in what those foulmouthed fellows say; they are disappointed in their expectations. They had planned it to do a large queen business in selling those twenty-five cent black queens for Carniolans.

Bear in mind, that no one can rear good queens and sell them at fifty cents each. To rear good queens requires lots of time, skill and patience. A word to the wise, etc.

THE WEATHER.

Hot! Well, wasn't it hot and hotter for about a week? On June 14, 15 and 16, the mercury climbed to about 100° in the shade. Dry and hot. On the 17th of June relief came; nearly 50° fall in the temperature and plenty of rain. New England has suffered with drought more or less severe nearly all the spring.

The hay crop will be light. A light hay crop means a light crop of white clover, consequently, a light crop of honey. Bees have done fairly well, notwithstanding the drought. The rain of to-day and yesterday will probably help the honey crop some.

QUEEN REARING.

The weather for this branch of bee-keeping has been all that one could desire. There was some unfavorable weather in May, but since June came in it has been fine nearly all the time.

Three hundred queens have been shipped from the Bay State Apiary since May 25. We still have a few more orders ahead which will be filled before this reaches the eye of our customers. Two hundred and seventy nucleus colonies are now in fine running order.

Now, if any reader of the API wants to see the finest queens (either golden Carniolan or golden Italian) just send your order in. Please do not fail to show these queens to your brother bee-keepers *after the queen has been in your hive a week.* You will not sell the queens sent you by us for $5. Just stick a pin in here. If these queens are not as represented, just say that we are bragging too much. You will not say so. The result will be that you will order more queens, and your neighbors who see them will also order, too.

THE SWARMER.

We must speak of the swarmer. All the reports that have come in are favorable. Not one unfavorable report has come to hand up to date. Our experience this season has been this: Occasionally a queen could not find her way through the tube. This was quickly remedied. A hole 1½ inches in diameter was made with a centre bit directly over the tube in box *B*, and covered with wire cloth. This let the light in just where it was most needed. After that, about the first bee that entered box *B* was the queen, and there was no further trouble. Those who have received the swarmers and found this trouble will take the hint. It was found that the nearer the hive, or decoy-box for catching the swarm was placed to the entrance of the parent hive the better the swarmer worked. Instead of using a hive for catching the swarm, a box made of any light material is better. We placed a comb in the decoy-box and a day or so before the swarm issued, the bees would commence to work into the box, then when the swarm came off they quickly hived themselves. Now in order to bring the boxes *A* and *C* nearer the parent hive, other holes were made in the centre of the tops of them. No one is obliged to use the swarmers just as they are received from us. Make any change in them to fit your hives and situation. The idea should not be lost sight of that the nearer the decoy-box can be placed to the parent colony the better. The swarmer is an assured success. Of this there is not a particle of doubt.

Here is one testimonial just received:

LONE STAR APIARY,
Thorndale, Texas, June 9, 1891.

FRIEND ALLEY: Swarming time is now over with me and I take the pleasure to report to you that the Aut. Swarm Hiver is the boss. The first time I tried it, it didn't work. The hive was a portico hive and I could not adjust right. Since then I have used it on hives without portico to my greatest satisfaction. I deem it the best swarming device I have ever seen.

Respectfully yours,
OTTO J. E. URBAN.

We have plenty others which will appear in later issues of the API. Orders for swarmers have come in from all quarters.

Now that the device is an assured

success, we make the following extraordinary liberal offer to all who desire to invest. One swarmer will be mailed, also one of the best queens, Italian or golden Carniolan (either one you will value at $10 when she has been in the hive long enough to develop her size, beauty and prolificness), the Api one year and deed of a farm-right to manufacture and use the swarmer, all for the small sum of $5.

BEES DOING WELL.

Not an unfavorable report up to date. Bees doing well in all parts of the country. We judge this is correct as we are getting so many orders for queens. The increase in our queen business may be owing to the free advertising we are getting from our friends (?). That's right, gents; keep on calling us a fraud and don't fail to say as often as you can that the yellow Carniolans are a humbug and that there are no such bees. By and by we shall convince you all that there are such bees as golden Carniolans, and those chaps who now dislike to believe the fact will feel about as cheap over the matter as it is possible to feel.

One Lowmaster, the man who sent us the inferior black queens for dark Carniolans in the season of 1890, has racked the world all over to find some enemy who will come out and give Alley a dig on his yellow Carniolans. Even Mr. Frank Benton has been appealed to. Benton is ready to say as bad things of Alley as any editor will publish. He has tried his little game on nearly all the first-class bee-papers, but his copy has been refused. Now Bro. B., send your articles to that two-cent bee-paper. They will use it. They are hard up for copy. Then again, we, that is, the editor of that bee-paper and ourselves have always been friends, and he has good reasons to try to do us an injury. Bro. B., don't fail to bear in mind that we have on our desk several letters from people in Australia who would like to hear from you,—yes, they would.

Some of these fellows should not cry fraud till they have first purged their own records.

That man Robinson, the crank whose article has appeared in several bee-papers is hardly worth our notice. It has been repeatedly shown in the bee journals that he is not responsible for his wild statements. His statement concerning what A. I. Root has said about golden Carniolans is a lie from beginning to end. Root has said nothing of the kind. The liars in the bee business seem quite active this season.

The reader will excuse these rambling remarks. It is actually necessary for us to make some reply in defence of the unwarrantable attack on us in public print. We will not mention the name of the paper that has tried to do us an injury. Don't care to advertise the dirty sheet, you know. When the editor and publisher has experimented in his line, and spent money enough to learn that he does not know how to publish a paper, and has no faculty for such work, then the little thing will go the way of all that is earthly.

Peace to its ashes!

The attack on us is as mean as it is cowardly, and without the slightest pretext as to cause.

We have taken legal steps to secure justice, and intend to leave no stone unturned, to bring the guilty editor to realize that he either does not understand the law, or that he has no taste of decency and good breeding. If falsehood and slander will make bee-publication successful, that fellow's paper should have a big circulation, as he takes the cake for meanness, lying and misrepresentation.

QUEENS IN EXCHANGE FOR HONEY.

If any reader desires to send us white clover honey, either extracted or comb, in exchange for queens or any other goods on our list, please notify us at once.

We want to purchase fifty colonies of bees this coming fall. Will pay cash or exchange goods for them. Write us how many you have for sale and kind of hives they are in.

A WORD TO THOSE WHO WRITE US.

Will you please bear in mind when you write us that it is important to have your full address plainly written. We have been terribly annoyed the last month with so many letters in which the name of the state is not given.

More than a month ago an order was received for a swarmer. The name of the state was not given. The one who ordered it has written twice about it. "Why don't you send my swarmer?" We cannot do it, as the name of the state was left off of every letter and card.

The person's name is *Nathaniel Frankler, Centro Valley.* We cannot find the name of any such town on our Post Office book. Can any reader of the Api help us out?

One day this week an order came for 500 sections. No name of state or of the writer was given.

MR. JACOB TIMPE.

Some one has informed us that the above named man has stated in his circular and price-list that we rear queens in small hives. Can it be possible that any one who has kept bees the last ten years is so ignorant of our methods of rearing queens? Mr. T. either does not keep posted in bee matters, or wilfully misrepresents the facts. About every one who takes an interest in bee-culture, knows that we rear no queens in any but the strongest colonies. Our method is to have the strongest colonies start the cell-cups, and when they have worked on them twenty-four hours, the cups are then given to bees to finish that have a fertile queen. Try and do your business, good friends, without injuring your brothers.

Has Mr. Timpe read the testimonials that have been published in the Api, concerning the queens we have sent out? Can Mr. T. produce *one* testimonial in favor of his queens and his method for rearing them?

I do not know how the 5-banded queen breeders produce their queens, but I do know that the 5-bands are produced by in-breeding, a method which destroys all the qualities of the bees except beauty. One man advertises, "Do you want bees that will roll in the honey? If so, try the 5-banded bees." We would like to know of one case when the 5-banded bees ever rolled in any honey. I do not believe there can be a case given where a colony of 5-banded bees has stored one pound of honey.

REDUCTION IN PRICES OF GOLDEN CARNIOLANS.

In order to introduce the golden Carniolan bees into as many apiaries as possible the present season, we shall mail queens at the following prices after July 15.

One queen, the best we can select, $1.50.

Three queens, all selected, $4.00.

Twelve queens, $13.00.

The Apiculturist one year and golden Carniolan queen, $2.00.

These bees do not swarm. They are as handsome as 5-banded Italians, very gentle and splendid honey gatherers. They will fill your hives full of bees, sections full of honey, and winter splendidly. Five-banded Italians will not winter in the northern states. All will die before spring. *We mean it.*

RENEW YOUR SUBSCRIPTION.

Renew at once and get one of those fine golden Italian queens.

Will send one Italian queen and the Api one year for $1.50.

Don't meddle with your colony for a week at least after introducing a queen. A young queen just introduced to a strange colony is pretty apt to take wing if the hive is opened, soon after she gets possession of the combs.

Order a golden Carniolan queen. Price, $1.50 after July 15.

QUEER THINGS THAT ARE PATENTED.

There is a claim in the patent office for a patent on the Lord's prayer, the specifications being that the repetition of the same "rapidly and in a loud tone of voice" will cure stammering.

Among odd inventions are "chicken hopples," which walk the chicken right out of the garden when she tries to scratch; "the bee moth excluder," which automatically shuts up the bee-hives when the bees go to roost; "the tapeworm fishhook," which speaks for itself; the 'educational balloon," a toy balloon with a map of the world on its surface; "sidehill annihilators, "stilts to fit on the down hill legs of a horse when he is plowing along a hill side; and the "hen surpriser," a device that drops the newly laid egg through the bottom of the nest, with intent to beguile and wheedle the hen into at once laying another.—*Exchange.*

CUBAN HONEY YIELDS.

From news which comes to us from Cuba, it is a wonderful honey country. The flow begins in December and lasts until May, and does not entirely cease at any season of the year. The honey produced is mainly extracted, of good quality for Southern honey, and sells at from 50 to 70 cents per gallon in New York City. The yields reported are some of them very large, as much as 150 to 200 pounds per colony, from apiaries ranging from 460 to 500 colonies.—*Rural Homes.*

HONEY AS MEDICINE.

The public are waking up to the importance of honey as a remedy for ills that flesh is heir to. A boy comes regularly to our honey-house, saying, "I want some more honey for father." He says that honey is the best medicine for his lungs that he has ever had. Honey is in demand for the baby's sore mouth, sister's throat, and mother's cough, etc. —*Mrs. L. Harrison in Prairie Farmer.*

APICULTURIST MAIL BOX.

SPLENDID CARNIOLAN QUEEN.

The Carniolan queen is splendid, her brood is just hatching large, beautiful and quiet, with every frame full.

JOS. P. BROWN, *Colora, Md.*

QUEEN SUCCESSFULLY INTRODUCED.

FRIEND ALLEY: Your beautiful yellow queen came to hand all right, and has been successfully introduced, I think, for the colony seems to have new life.

It had been without a queen several weeks and had become indolent. Also your golden covered monthly APICULTURIST contains golden ideas. I like it, and so long as its pages are so rich and practical, I shall welcome its visits to my home.

C. M. HERRING, *Brunswick, Maine.*

HOW IT WORKS.

MR. ALLEY: Enclosed find 75 cents for premium queen to subscriber. ——— booked my order for queen last December. Now he writes that I can have my money or wait till July for queen.

JOHN C. ROGERS.
Stamford, New York.

You did a wise thing Bro. R. in sending here for a queen. You not only get one by return mail, but you will get as good a queen for the 75 cents as can be purchased for $5 of any other dealer. It looks as though the 5-band adv. took you in. You will find the bees from the queen we send you as handsome as any 5-banded bees in the world.

BEES DOING WELL.

Bees are doing well here and the weather so far has been favorable. With the help of the API I hope to make them a success this year even if I am only a woman.

MRS. A. L. HALLENBECK, *Millard, Neb.*

SPECIAL NOTICE.

To meet the popular demand for the APICULTURIST and premium queen, the same terms as given in the API the last six years will be continued through the year 1891, as follows: The APICULTURIST one year and a select queen from our best strain of Italian, $1.50. APICULTURIST and select golden Carniolan queen, $2.25. APICULTURIST and automatic swarmer by mail, $1.50.

Any subscriber, whether old or new, can get one select Italian queen for 75 cents.

After June 10, 1891, Italian queens will be mailed at the following rates:

1	warranted queen, ...	$1.25.
3	" "	3.50.
12	" "	12.00.

Tested queens, each, $2.00. Select tested, each, $3.00.

After the above date we shall be prepared to ship queens by return mail.

Every queen guaranteed to be perfect and satisfactory in every respect, or other queens will be sent.

HENRY ALLEY, WENHAM, MASS.

THE SELF-HIVER.

FIRST REPORTS FOR 1891.

On Saturday, March 28, 1891, I placed one of Mr. Alley's self-hivers at the entrance of a hive from which I knew the bees would swarm in a few days; near this hive was one prepared to receive the new swarm when it issued. On Sunday afternoon about four o'clock, in walking through the apiary, I saw the bees at work in the new hive. They had swarmed and hived themselves and were working nicely, without any assistance whatever on my part, except to make the necessary preparation for them. This self-hiver will certainly be a wonderful help to beekeepers.

By the use of the drone-trap and queen-cage combined, which was invented by the same gentleman, I secured 48 swarms out of 49, in 1888, without so much as having to cut a single twig in hiving them.

MRS. SALLIE E. SHERMAN, *Salado, Bell County, Texas.*

FRIEND ALLEY: About all I have got time to say is the swarmer gets there OK. JENNY ATCHLEY,

May 1, 1891. *Farmersville, Texas.*

One hiver by mail and the APICULTURIST from June 1, 1891, to July 1, 1892, sent for $1.50. We are having a large call for farm, township and county rights to manufacture the swarmer. Any beekeeper will find it a good investment to purchase the right for the county in which he lives. Send for a sample hiver and if it suits you send $4.00 more and get an individual right and manufacture your own hivers. We can supply you with any parts of the hiver.

I WILL PAY $10 FOR EVERY SWARM LOST WHERE THE HIVER IS USED.

Sample Hiver by mail, $1.00. Wholesale prices given on application.

Address HENRY ALLEY, WENHAM, ESSEX CO., MASS.

THE AMERICAN APICULTURIST.

A Journal Devoted to Practical Beekeeping.

VOL. IX. AUGUST, 1891. No. 8.

THOSE WONDERFUL PUNIC BEES.

At last we have a non-stinging bee, and many persons, who would go into apiculture but for the business end of that insect, can now keep bees for both pleasure and profit.

Read what appeared in the *Canadian Bee Journal* concerning the wonderful Punic bees.

THE PUNIC BEE.

So much has been said, pro and con, about the "coming bee," to be called *Apis Americana*, the qualities it is to possess, etc., that many will be taken by surprise to learn that a bee has been found that excels anything ever predicted, in the coming American wonder.

The name of this bee is the Punic bee, *Apis Niger;* 'tis shiny black in color, and is smaller than our native black bees, or Italians. There are no brands or marks of any kind on it, young bees are the color of green ebony, shading off to true raw ebony when beginning to field, and finishing off to polished ebony when old and all hairs are worn off them.

Their qualities are: 1st. They are the tamest bees known—the only time when it is possible to get them to sting, being when they have the swarming fever on.

2nd. In crossing with other races, this quality is very marked; not even Cyprian blood being able to make them bad tempered.

3rd. They are the hardiest bees known. They can fly from and to their hives with safety, with snow on the ground and two degrees of frost.

4th. They do not fly into the snow like other bees.

5th. They begin work before sunrise and have the ground picked over before other kinds are on the move.

6th If the day is rather dull, or cool, they will be working in full blast though no other kinds of bees will be flying.

7th. The queens are very prolific.

8th. In a fair season the smallest nuclei will build up without feeding into a grand stock for winter. So much is this "building up" quality present in them that a good strong stock can be divided into twenty nuclei the end of May, and each will build in a good season without feeding, into a 10-frame stock, well stored for the winter and yield one or two 20-lb. supers of honey from the heather.

9th. They beat every other kind in their working energies.

10th. They live longer than any others.

11th. They fill and seal sections fuller, and cap them whiter than any other bees.

12th. For extracted honey they have no equal.

13th. They can eat the hardest and dryest sugar; in fact, they will carry away the hardest and dryest sugar loaf (when no honey is to be got), put under a shed and kept as dry as possible.

14th. Although they search out sweets and carry them off anywhere,

they are not inclined to rob other hives—"honesty" being with them a ruling guide or principle.

15th. They swarm earlier than any others.

16th. They fill all cracks or chinks with an enormous quantity of propolis, and if natural supplies fail, nothing sticky comes amiss, such as birdlime, coal tar, etc. Some may deny this as being a desirable quality, but with it they keep their combs clean, and they thus make anything do for hives, even baskets.

17th. They cluster well on their combs, spread evenly over them, and shake off readily.

To sum up, we have a bee, docile, hard-working, prolific, non-robbing, and best for comb honey. They have many other good points, that are more in favor of the queen breeder, horticulturist, etc., than the honey producer; this being the party to appreciate the bee that does not sting, and will build up from 1 to 20, and possibly yield 1,000 lbs. of surplus honey.

I have reared and sent out very many virgin queens the past summer, and so well are the parties being satisfied with them that I am fairly besieged with requests for more. One well known party offers me £1 ($5.00) each for half a dozen; but I can't let him have any till next spring Others are sending in orders for next season to have them in time to be early; all these being from parties who have tried them, so there must be something good in them.

They also have the following characteristics: if a pure blooded queen mates with a drone of any other race, her bees are a blend of the two races; and though better than the race mated to, are not quite so good as pure. If a pure Punic drone mates with a queen of any other race, the resulting bees almost equal pure Punics for honey gathering, and in other respects the cross is very marked—Carniolans, for instance, using propolis as much as pure Punics.

I have never seen their equal in building comb, which is nearly always worker, as white as snow. Their brood is always compact and sealed in such a manner that I could easily pick out a frame of Punic brood from among a thousand.

In "building up" all we have to do is to see that they have plenty of stores, if not, then feed them as rapidly as possible and let them alone. They will breed away like mad, and work hard too, in picking up.

No stimulating, slow feeding, brood spreading, etc. All they require is plenty of room, and sure enough they will find it if left alone.

Talking of "feeding," I have not had to feed any established stock yet; other bees may have dried combs, but they won't. I often, in the fall, feed nuclei to work them up into stocks for winter, and again may give them a feed in the spring

I have tried Palestines, Syrians—which are the best yellow race—Italians, Cyprians and Carniolans, with the result that I find that the only bees which excels are the Punics. Carniolans are a good race and stood first on the list.

I have been "much asked" for Punic queens, imported and pure mated: and I have not been able to supply any, though I have reared and distributed several hundred virgin ones. I have tried for years to get more imported ones, without succeeding until the past summer, when I managed to get an importation, at a cost which I dare not mention for fear of being regarded as a crank lunatic. But for all that, I am going in for more, and hope to get fifty queens at least, in February, or early in March, 1891.

The difficulties to contend with may be guessed at a little when I say that I have to make and prepare travelling hives here, and then get them to their native land in Africa, on the borders of the great Sahara desert. They have to be carried to and from the coast, either on the heads of negro natives

or the backs of camels. After the middle of March, it is too hot to transport them to the coast with safety. Their natural swarming months are December, January and February, so I hope to get only young queens All the arrangements will be carried out by the party who got me the lot this summer. He knows a queen when he sees one, but for all that I shall not be surprised to find some queenless. But as he is to buy second swarms and old stocks that have swarmed and merely turn the bees into boxes, ready prepared for the journey, I don't expect any mistakes as he knows the country and the natives, and how to deal with them which is everything, almost. What they will cost me is all guess work, but I shall have it to pay, no matter what it is, and though I want most of the queens for my own use, the undertaking is almost with a view to carry on the importation through my friend in future. Should any one wish for a queen, I would undertake to deliver one free and safe (guaranteeing introduction as well) anywhere on the North American continent, if spoken for before March 1, 1891, for $40. They certainly won't be less than this, perhaps very much more; but, as I say, I am on with the experiment to see what they will cost me to import. Every dollar I can "unload" will be so much less expense to bear.

Considering how readily they can be propagated, they would pay well, even if imported breeding queens cost $100 each, and possibly this is the sum they will cost. It is quite a regular thing for a first swarm to leave 200 queen cells behind, while 600 is really nothing to be surprised at. If a frame filled with drone foundation, or a drone comb cut down to midrib, is put in a stock about preparing to swarm, every drone cell will be worked out into a queen cell, that is vertically, but hexagonally, and when sealed every beekeeper would say it was drone brood that was sealed over. I think it is quite possible to get 2,000 cells sealed to work in this manner, but can't say, not having tried to get them, as it was impossible to get nuclei for what I did get. I have not put this down as a point in their favor, as it is not one to count in honey production, still it is a good point, as it makes it possible to have all the queens wanted from the best stock for all the others.

A Hallamshire Beekeeper.

PUNIC BEE NOTES.

The Punics thus far are answering to their claims remarkably. Of course I have not had time enough to see them all, but am compelled to say they are panning out well.

The imported stock in our yard was very expensive and required courage for the investment. I probably paid a larger price for my Punic bees than any man ever before paid for queens of any race. Imported Punic queens are now offered at $80.00 each, and the price may go even higher, so if they are wanted, the order should be given at once.

When Punic bees have the swarming fever on, they will construct large numbers of fine cells, and they need not be cut out or touched, but the queen allowed to hatch in a natural way. Not one young queen will be lost if the swarming fever is kept on as they will be protected and fed in their cells by the bees. Another thing, if a frame containing eggs of very young larvæ is inserted in the middle of the brood-chamber of a Punic colony having the swarming fever on, queen cells will be started and sealed very even, and no matter how many cells may be already started, sealed, queens piping, or queens hatched. If the stock swarms, catch the old queen and put all the bees back, then insert a comb of Punic eggs and brood every four days, and you will get all the cells you want constructed, and there will be no need of mutilating a single comb, as the young queen can be picked off the combs and cells as fast as hatched. The quality

of queens by this method is the same as natural swarm cells, and from 10 to 150 per week can be had from May to August, providing the combs of brood are given every five days to keep up the strength.

A gentleman in Scotland who introduced a virgin Punic queen to one of his hives last fall writes as follows:

If I can manage to prepare for more than a dozen virgin Punics will let you know. Should really like to try about 20. The one I successfully introduced last season is now (May 16, 1891) far ahead of all my other stock. They are busy when other hives are not moving.

The gentleman who writes under the *nom de plume* of "A Lanarkshire Bee Keeper," whose address could be given, had two weak nuclei of Punic bees last spring, and they yielded nine pounds more honey than any other stock in his yard. This year they are the best and strongest he has. He is so well pleased with the Punics that he is going in for them entirely.

Our Punic stock is "Hallanshire" imported direct from their native land under great difficulties.

Young Punic queens are the most lively we ever handled. In introducing them, one needs to exercise great care. They are as quick as a flash, and if you are not quicker they will be lost. The safest way to get hold of them is to let them out before a window and take them from there when all is ready.

Out of nearly 2,000 virgin queens sent out to parties in England for trial last year, not one failed to introduce them safely when the directions were strictly followed.

If you are not pleased with the Punic queens bought of us, and if you think you have made a bad bargain, we will willingly refund the money.

All orders will be filled in rotation, so do not expect your queen out of order.

STILL DOING WELL.

FRIEND ALLEY: The queen you sent me in 1888 is still doing well.

Limerick, Ill. E. PICKUP.

E. L. PRATT PAYS HIS RESPECTS TO THOSE WHO HAVE SLANDERED HIM.

THE PUNIC BEES.

Henry Alley and E. L. Pratt have been hubs of unjust criticism the past few months by some of the small sheets published in the interest (?) of bee-keepers. The one with the Argus-eyed type gave us a special number. One Robinson sailed into me in a very abusive manner, but I shall let that pass. Several other men gave us special ads. in their printed circulars, claiming that our methods of rearing queens are not what they should be. Our patrons will tell a different story. Jacob Timpe is either very ignorant of our methods of queen-rearing, or he intends a malicious attack for the purpose of selling those worthless five-banded Italians of his. Well, gentlemen, I for one thank you for your free notices, but would be more pleased if you would stick to the truth and learn of the methods employed by us before jumping at conclusions for the purpose of injuring our reputation as dealers in queens.

I wish we all were as progressive as the anonymous correspondent in the *American Bee Journal*. What do you think? He starts to run down the Punic bees before he has ever seen them even. What can possess such men? I do not wonder that he did not sign his name.

Mr. Quigley worked in a side slap at me in the editorial department of his paper, not knowing what he was saying and caring less so long as Pratt was hit. What does he know about the Punic bees? He has never seen even one bee. Would this not be a progressive world (?) if we were all hewn from the same log—no courage to leave the old ruts? Let these men squeal. There are enough progressive beekeepers to give the Punic bees a fair trial, and after they prove themselves "Rex," how quickly these fault finders will wheel around and take unto themselves what few honors are forgotten or dropped in the fray.

THE DRONE-TRAP AND SWARMER.

MR. HENRY ALLEY: I want to tell you that your drone and-queen trap is the best implement I have ever used in beekeeping. One of my neighbors would not believe the trap would catch a queen; so he placed it on a hive. The bees swarmed and started off, the neighbor started for them, without first examining the trap to see if the queen was in it. The queen was trapped and the bees arrived home before the man in pursuit.

THE SWARMER.

A beekeeper living near here bought one of your swarmers and placed it on a hive according to directions, and went out to his work, ploughing. When he returned home his bees had swarmed and were at work in the new hive and all right without any trouble to him.

JOSEPH P. SEWALL.

Cumming, Ga.

THE APIARY.

Every fruit grower ought to raise a few bees and every cultivator of grains and plants should do likewise. The fruit blossoms waste a great deal of nectar unless bees are around to gather it, and it is yet to be shown that they injure any of the fruits. It is a suggestive question whether bees do not improve every kind of plant growth, and whether all of our vegetation would not be better if bees were more plentiful.

In locating an apiary, care should be taken to see what kind of a harvest the bees are to have. Planting exclusively for honey is hardly paying work unless there are some native blossoms already planted beforehand. In great fruit and flower regions the bees are sure to find enough nectar to make plenty of honey. The ideal place for an apiary is where the bees can get spring, summer and fall blooms. The fruit grower can add beekeeping to his other labors, and make a profit thereby. Many of our flowers, such as clover, squashes, and fruit blossoms, fail of fruitage, unless some insect bear the pollen of one blossom to the pistil of another. It has been repeatedly demonstrated that if these plants be screened from insects the yield of seed and fruit would be but partial. All of the hundred million pounds of honey that are gathered annually by the bees would all go to waste were it not for the apiarist and his fostering care of the bees. There is no doubt but millions of wealth of nectar annually go to waste now in this country, for no matter how numerous the colonies of bees may be in any section it is doubtful whether they exhaust the floral resources. There are still great resources of the industry that have never been touched, and with the increased demand for honey more profits than ever will be realized from bees.

Already a large amount of honey is annually consumed in the various industries of pork-packing, tobacco and other manufactures, while the commercial value of beeswax is very great. Nearly 500 tons of beeswax are annually imported into Great Britain, while Russia alone uses nearly 5,000 tons in the ceremonies of the church.

It is in Germany and Switzerland that the resources of the flowers are utilized in the most advantageous way, and very little nectar from trees or plants is allowed to go to waste. The art of beekeeping is taught in the public schools of Germany, and instructors frequently go from town to town to teach the farmers how best to keep bees, and to utilize the nectar of their fruit orchard and clover fields. In Switzerland honey is used almost as commonly as butter, and large quantities are raised and consumed in this small country.

In making this industry profitable the apiarist must look after all of the details and see to it that nothing is allowed to go to waste. The production of a first-class article can only be obtained where the honey is completely capped and ripened by the bees The so-called tiering-up system is indispensable in this; and to make a fancy article, the highest-priced white-poplar

sections should be used. The shipping crates should hold no more than one tier of sections, and not over twenty-five pounds. Of late there is a demand for neat, small, six-pound crates, and by the use of tin or wood separators between the sections while being filled beautiful uniform sections may be obtained, and shipped with little danger of leakage. Before sent to market all of the bee glue or propolis should be removed from the sections to make the work neat and clean.—ANNIE C. WEBSTER.—*Exchange.*

A SENSIBLE BEEKEEPER.

MY DEAR SIR: Having accidentally got hold of your work on queen-rearing, I am induced to write you for prices of queens and nuclei. I am anxious to get a better class of bees into our county, and am inclined to think you are the right party to supply them.

A. J. ORNDORF.

Greensburg, Pa.

GOOD ENOUGH

I rather buy my queens from you than of any one else in this country.

J. D. ANDERSON.

Mallory, Texas.

SHE IS A BEAUTY.

Queen arrived safe June 19, and was safely introduced. She is a beauty.

MRS. A. L. HALLENBECK.

Millard, Nebraska.

ABOUT DISGUSTED WITH THE ITALIANS.

BRO. ALLEY: I was about disgusted with the Italian queens I had bought of other dealers. Never saw anything like the one you have sent me. She is as yellow as gold.

W. M. GLOVER.

Big Creek, Ga.

LIKES OUR STRAIN OF ITALIANS.

MR. ALLEY: Find enclosed $1.50 for API and queen. I like your strain of bees and would rather have them than those of any other dealer.

C. W. LUNDY.

Myersville, Maryland.

BEE-CULTURE A NATIONAL INDUSTRY.

Among the recent industries of rapid growth in this country, bee-culture stands preëminent. Of course, as a homely art, beekeeping is no modern industry, being as old as history; but in its scientific developments, it is of recent growth.

In these times, when science is properly taking its place at the helm in all departments of human industry and activity, it is not strange that it is promptly assuming the guidance of bee-culture.

This is a utilitarian, as well as a scientific age; and this is why bee-culture is being so rapidly developed, for its extraordinary growth is only in the ratio of its utility.

Though known to commerce for 2,500 years, hitherto it has been followed and known, in this country at least, principally as a local industry. But bee-culture, from the soundest economic considerations, ought undoubtedly to become a great national industry, fostered and protected by the state.—*Exchange.*

INTERESTED IN THE GOLDEN CARNIOLANS.

HENRY ALLEY: I write to tell you that I am very much interested in your description in the *American Beekeeper* of yellow Carniolan bees. There is a great deal of truth in what you say, as I find it tallies with our experience with the Carniolan bees to perfection. We have both imported and home-bred stock, and for anything we know are the most extensive queen-rearers in Canada. We make a specialty of rearing Carniolan queens, and the kind we are trying for is the kind without the yellow bands, and I must say that now that we don't succeed with them very well, as every generation down seems to show an extra yellow band. The bees from these yellow queens are just as peaceable and good honey gatherers as the grays are, and why they should

show any yellow bands is more than we can tell. I don't know as I shall be lucky enough to be among the first ten to send for a queen, but I hope I may as I would like very much to see how your yellow queens would compare with ours here in Canada.

FRANK WALKER.

Fargo, Ont., Ca.

KINDLY REFERRED TO BROTHERS BENTON, QUIGLEY, LOWMASTER AND ROBINSON.

FRIEND ALLEY: I see that your yellow Carniolans are condemned in certain quarters. I will give you my experience with Carniolans. I find that it is almost impossible to keep that race without yellow bands. One queen I bought, I could not detect a bee with a yellow band; but it was not very long before I noticed a few bees with yellow bands on them, and in one season, the bees with bands gradually got more and more abundant until over one-third of the colony had bands. A great many had two yellow bands; the colony at last looked as if it was nothing but hybrids; now some of those fellows will say that the colony changed queens. Don't you tell me that, as I know better. I kept too good a watch on them. My experience with the Carniolans is that it is a hopeless task to breed them without yellow bands, and my experience with Italians is that they will get darker; but the Syrians I believe a pure race; no trouble to keep them straight yellow, although I hope you will breed up a good strain of golden Carniolans. I shall watch your efforts closely.

ESAU RUSSELL.

Ida Grove, Iowa.

WANTS TWO MORE LIKE HER.

MR. H. ALLEY: The golden Carniolan queen came all right and is now laying nicely. She is certainly a beauty. I am so well pleased with her that I want two more.

T. E. TURNER.

Templeton, Wis.

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EDITORIAL NOTES.

A WORD ABOUT THE PUNICS.

Nothing has been said in the API about this wonderful race of bees. Now these bees are here and as we have seen them, the API has something to say. So far as can be judged by what little experience we have had with these bees, we can say our opinion is most favorable to them. If the Punic bees are one-half as good as is claimed, every beekeeper will want them and all other races will be superseded.

The queens are very active and strong, and, although they are very black, are easily found on the combs as their legs are of a rich, bright orange color.

The workers cannot be made to use their stings by any method we tried. Mr. Pratt took several by the wings and drew them across the back of his hand, but they would not attempt to sting. He then tried to induce them to sting my bare arm by drawing the bee over the flesh, but it could not be done.

Now that we have seen these bees and have become convinced of their superiority, we shall commence to rear them, and by Aug. 10, shall have purely fertilized queens of this race ready to mail.

By all previous experience in queen rearing, we know that there will be a large call for these queens and the following condition must be observed by all who order them:

1. Your order when received will be registered, and when the queens are ready to mail, customers will be notified a few days beforehand. Now this is not exactly necessary, as the queen

will live and be in good condition for a week after being received. If the directions sent with the queen for introducing are strictly followed, safe introduction will be guaranteed.

2. If you are not willing to wait for your order to be filled, do not order; we cannot fill orders for several hundred queens in one week. Then, again, we cannot control the weather, and when a week of dull weather is upon us, no queens will be fertilized, and we must wait until they are fertilized before shipping them.

Now please bear in mind that we cannot ship you purely mated queens of this race before Aug. 10.

We are making preparations to rear and ship 500 Punic queens between July 25 and Sept. 30. Send your order in early and the queens will be mailed as promptly as possible.

Right here we will say that E. L. Pratt is in no way connected with us in business. Brother Pratt runs his own business and we do the same. Our yards are located but two miles apart and we get along very well and help each other as much as possible. In fact, we are working for our own good as well as for the advantage of our customers.

Brother Pratt has been furnished with several golden Carniolan queens from the Bay State Apiary, and we have in return received several Punic queens. One of the latter is an imported queen.

For prices of Punic bees and queens see page 116.

BIG ORDERS FOR GOLDEN CARNIOLANS.

We are receiving more orders for golden Carniolan queens than for Italians. This seems to look as though my old friends are not much afraid of being swindled. Please read the testimonials in this issue from those who have received their queens this year. Many thanks to Bros. Q., L. and R. If Quigley does not stop this free adv. he has been giving the golden Carniolans, we shall be obliged to employ some of the noted queen breeders to help us out. Fifty orders per day for these queens is about as much business as we can attend to

Mr. Frank Benton tells the readers of the *American Beekeeper* that there are no such bees as yellow Carniolans. Benton is not posted. Now, Mr. F. B., we make this proposition: If you will send two of the purest dark Carniolan queens found in your country to some reliable queen dealer, whom A. I. Root shall name, and i he will follow our instructions and cannot produce beautiful golden queens and bees from these two queens after breeding a few generations, then we will give in that there are no such bees as yellow Carniolans.

If F. B. will look this issue over carefully, he will find plenty of evidence concerning this matter to convince him that the position we have taken concerning the Carniolans is correct. We called upon no one to verify our statements, or to give their experience. What is published came to the API unsolicited.

Any beekeeper can take the darkest Carniolan bees and in a short time produce the most beautiful yellow queens and bees from them. Try it.

Again, I say that the yellow Carniolan bees are the original yellow race. This statement has not been controverted by any evidence yet given by Benton, Quigley, Robinson and Co.

OUR QUEEN YARDS.

Perhaps some of our readers may have an idea that we rear all our queens and have them fertilized in the same yard. This is not so. Our golden Carniolans (we have no dark Carniolans) are kept in a yard two miles from all other bees; this yard is directly east of our home apiary. About one hundred nucleus colonies are kept in the home yard, but as the drone-trap is kept on the full colonies, except those whose drones we use for our young queens, there is no mixing of the races. Then we have another queen yard of over 100 nuclei two miles west of the home yard.

All these nuclei have to be fed twice each week, and our old horse and ourselves are kept pretty busy going from yard to yard.

A LARGE SHIPMENT OF QUEENS.

During the week ending July 18, there were one hundred and fifty queens shipped from the Bay State queen-rearing apiaries. We believe this is the largest number any queen dealer in the world has ever shipped in the same number of days.

Over 500 queens have been shipped from our apiary up to date (July 18).

Thus far there has been but one unfavorable spell of weather to interfere with queen rearing. This occurred between July 1 and 11.

TOBACCO IN INTRODUCING QUEENS.

We have always used the smoke of tobacco in introducing queens, and with the best results at all times.

Brother A. I. Root has recently tried it, and seems quite satisfied with the result. This is how Brother Root did it.

I omitted to say, that, as a further precaution, I went round towards evening to all the colonies that had an imported queen, and blew tobacco smoke in at the entrance—enough to give them all one scent. As all the queens were successfully introduced except the two that were so feeble, I do not know how much effect the tobacco had. But this I do know: Last year we received an importation of some fifty queens. Half of the number were given to neighbor H., and half we retained in our own yard. They were all, or nearly all, caged by the candy method. We lost 25 per cent of those we introduced, while neighbor H. lost none. In comparing notes we found that he had smoked his the night before thoroughly with tobacco smoke, while we did not observe this precaution. You know how we stand on the tobacco question in regard to its use by the genus *homo*. But a good many bad things (or things which are usually used in a bad way) have certain legitimate uses. There is nothing else that gives such a strong, clinging odor as does tobacco.—*Gleanings*.

Tobacco will do it every time. Immediate introduction of queens by tobacco smoke is one of our hobbies. We have introduced hundreds of queens at the time the colony was dequeened. There is no way it can be done successfully except by using tobacco.

We use tobacco in a pipe made for the sole purpose of introducing queens and handling bees. Thousands of them have been mailed from here. Now we propose to give each purchaser of a Punic queen one of these pipes, all loaded for use with tobacco. As we guarantee safe introduction we want each purchaser to have one of the pipes. The pipe will be sent by mail.

SLANDER AND MISREPRESENTATION.

The following piece of slander and falsehood is from the circular of Jacob Timpe.

Many of the breeders use nuclei, with combs no larger than 4¼ by 4¼, or merely sections, and E. L. Pratt, Beverly, Mass., and H. Alley, Wenham, Mass., openly advocate their use, the latter showing illustrations where he has his cells built on 5 by 5 inch frames. The past season I tried nineteen hives of the section frames for mating queens to my sorrow. My conscience will not allow me to do so any more. Would you want such queens? Those are cheap queens and cheap production, and very, VERY dear in the end.

My yard is open to inspection. I use only full colonies for cell building, and 3 frame 13⅜ by 9¼ inches. Nuclei for mating purposes. If any queen that I send out the coming season (except virgin) prove mismated or worthless, I faithfully promise to re-fill the order gratis.

E. L. Pratt and H. Alley rear no queens on such frames as the author of the above would have his readers believe. Well, now suppose we did rear queens and have them fertilized on those small frames, what has the frame to do with the quality of the queens so reared?

Some years ago we did rear queens on small frames, but we used from twenty-six to forty such frames in one hive in which the cells were being built. The largest colonies were utilized to construct the cells. What a simple fellow this man Timpe must be, if he has an idea that the illustration in our book

showing a frame of cells is intended merely to show the frame. Everybody else well knew that it was the cluster of queen cells that was illustrated and not the frame.

"They are very cheap queens," says Timpe. Does not our reputation (Pratt and Alley) as queen dealers stand as well as that of J. Timpe? Do we not rear and ship doubl', yes, treble the number of queens each year that this wonderful 5-banded-bee man Timpe does?

His conscience won't let him rear and ship such queens! Rats! We wish your conscience would cover a little larger territory and prevent you from lying and misrepresenting truth and facts. Try and develop a larger conscience Brother T., and then keep within the bounds of truth and decency.

Pratt and Alley rear queens on larger frames than does Jacob Timpe and we get better prices for them, too. We both use small frames in nuclei in which our queens are kept until fertilized.

In order to sell his queens Timpe tells his readers that five-banded bees gather honey from red clover. If there is a beekeeper in the world who does not know that this is false, every word of it, it must be that he reads none of the bee-papers. One race or strain of bees will gather honey from red clover as well as another—none can do it.

Finally, our columns are open to Mr. Timpe, or to any other man who thinks he can tell why just as good queens cannot be reared on small combs as well as on large ones. Come on, brother T., and tell us what you know about it. Does this man Timpe know what the late Moses Quinby said in his work on bee culture concerning rearing queens on small frames and in small hives? But there! what did Mr. Quinby know, or what does anyone know about bees compared with Timpe? We must all yield to his superior knowledge in bee-keeping. A wonderful man, yet he cannot rear good queens on small frames, or, he might just as well have added, on large frames either.

A VALUABLE QUEEN.

Brother Pratt was at our apiary a few days ago and we were looking over some colonies to which some beautiful golden Carniolan queens had been introduced. The young bees were hatching in large numbers.

One of the queens gave splendidly marked bees. Brother Pratt was anxious to have that queen, and although he offered a ten dollar note, we did not part with her. Just forty dollars more will purchase her. A clean fresh comb was inserted in the brood-chamber of the colony above mentioned and before Sept. 1, there will be several hundred fine young golden Carniolan queens reared from this beautiful queen.

The golden Carniolans are giving perfect satisfaction to those who have received them. The queens are large, of a rich golden color, exceedingly prolific, and any full colony can be opened without smoke, or protection of any kind to the person, and not a bee will attempt to sting.

Their working qualities cannot be excelled by any race or strain of bees.

THE PRICES OF PUNIC QUEENS, FULL COLONIES AND NUCLEI.

QUEENS.

Warranted purely mated, each	$5.00
Tested . . . . . "	8.00
Select tested . . . . "	10.00

NUCLEUS COLONIES

Three L. frames with brood and bees sufficient to build up, including a tested queeen	$14.00
With select tested queen . .	18.00

FULL COLONIES.

Full colonies, each containing seven L. frames with stores and in good order for winter, safe arrival guaranteed $25.00.

Full colonies with tested queens will be ready to ship Sept. 20.

Tested and select tested queens ready to mail Sept. 10 to Oct. 10.

Address Henry Alley, Essex Co., Wenham, Mass.

FOR YOU TO READ.

One selected golden Carniolan queen and the American Apiculturist one year for the small sum of $2. The queen will be worth $5.

BEE NOTES.

August is the month to get the stocks in good condition for winter. The bees that are reared this month and in September are the ones that go through the winter. Examine your colonies, and if any have inferior queens requeen at once.

No doubt there are some localities where there has not been sufficient forage to keep the bees in a prosperous condition as to brood-rearing. A little sugar syrup fed occasionally will act as a stimulant and keep up brood-rearing so that when the fall harvest comes on, the colonies will be strong enough to gather sufficient stores for winter.

If bees are to be made a success they should not be allowed to lie in a dormant condition at any time during the warm months. Keep them rearing brood all the time by feeding a little.

If you do not feel able to invest in the Punic bees, send and get some of the golden Carniolan. If these bees do not give perfect satisfaction, other queens will be sent, or money refunded. Just two (2) dollars will get a select golden Carniolan queen and the Api one year.

A good many of our Carniolan bees have but one yellow band, but that one band covers nearly the entire length of the body. The bees in color are almost a solid golden yellow. This one band is wider and covers more of the body of the bee than all five of the bands of the 5-banded Italian.

A sample of these bees will be mailed to any address on receipt of ten cents If they are not as yellow as above stated, we will forfeit $1.00 to each person who sends ten cents for a specimen.

This fact of the wide bands should convince anyone that the yellow Carniolan bees are a new and distinct strain, as no other bees in the world have bodies so nearly solid yellow as do the golden Carniolans.

Apiculturist Mail-box.

HOW IS THIS FRANK B.?

MR. ALLEY: My experience with the Carniolan bees is somewhat in line with yours. My breeding queen was purchased from Frank Benton, and he sent me a queen whose progeny was to show no yellow bands. Her bees are of a steel gray, but I have not reared a single queen that does not produce bees with yellow on them.

Gordon, Indiana. A. L. LINDLEY.

Your experience is the same as every person who has tried to rear Carniolan bees in America. A few of the queens sent here do not produce bees with any yellow bands, but the progeny of all the young queens do. It takes back. Mr. F. B. will tell you all the young queens mate with yellow drones. They do not; yellow is the natural color of the Carniolans.- ED.]

QUEEN DOING NICELY.

MR. ALLEY: The queen you sent me in June has all the combs of her hive filled with brood of her own, and the bees are doing nicely.

MRS. A. L. HALLENBECK.

Millard, Nebraska.

THEY BEAT THE BEST ITALIAN.

MR. E. L. PRATT: The golden Carniolans I purchased of you last season have done better with me this year than my best Italians.

Hartford, Conn. EUGENE A. WANDER.

WE DO IT EVERYTIME.

FRIEND ALLEY: If you send all your subscribers who accept of your offer such large and beautiful yellow queens like the ones you sent me, they surely will all be pleased. I am well pleased with the way all three of my queens went to filling up the brood-nest with eggs. I have every indication they will be very prolific.

G. D. A. FISHER.

Faith, N. C.

A SPLENDID BREEDING QUEEN.

FRIEND ALLEY: The queen I received from you last fall is a splendid breeding queen. Her bees are beauties and as gentle as can be. I use no smoke nor veil when I handle them. I wish all my bees were like them.

EDGAR BRIGGS.

Poughkeepsie, N. Y.

LIVELY AND BRIGHT.

MR. ALLEY: The two golden Carniolan queens were received in fine condition, as bright and lively as the day they left the hive. They are beauties.

J. W. WEIR.

Reinersville, Ohio.

BEST QUEEN IN CLINTON COUNTY.

MR. ALLEY: Two years ago I purchased an Italian queen from you for $1. Was well pleased, and she was considered the finest queen in this country. We want two more queens.

E. B. HANGHEY.

Sabina, Clinton Co., Ohio.

DELIGHTED WITH THE QUEEN.

H. ALLEY: Queen received in good order. I peeped into the cage and find she is a beauty and I am delighted with her appearance.

F. O. BLAIR.

Trinidad, Colorado.

THEY ADMIRE THE ALLEY QUEEN.

HENRY ALLEY: The second queen arrived a week ago to-day and in good condition. The double cage seems to have made the difference. Several of my friends, one an experienced bee-keeper, have had occasion to admire the fine Alley queen.

B. W. LAW.

Havana, Cuba.

UNQUALIFIED RECOMMENDATION.

HENRY ALLEY: I can give my unqualified recommendation to your drone-and-queen trap, having used them in my apiary this season with success.

E. W. HOWES, M.D.

Chatham, N. Y.

IT WORKS SUCCESSFULLY.

The self hiver I got of you works successfully.

E. A. BALDWIN.

West Upton, Mass.

PRACTICALLY NON-STINGING.

The golden Carniolan bees are practically non-stinging. Beekeepers who are badly affected by stings should introduce these bees into their apiaries.

THAT IS OUR OPINION.

MR ALLEY: The queens you sent me last are the best queens that ever came into this neighborhood.

Industry, Pa. COL. R. WALTON.

NOT AFRAID OF THE GOLDEN CARNIOLANS.

MR. H. ALLEY: The two golden Carniolan queens received to-day, and not a dead bee in either cage. Please accept thanks. Find cash enclosed for one dozen more.

HENRY HARPER.

Sheldon, Indiana.

ELEVEN FINE QUEENS.

HENRY ALLEY, ESQ.: Eleven of the twelve queens received from you last were fine. One proved to be mismated. Find cash for another dozen.

MCWILLIAMS & MILLER.

Prattsville, N. Y.

THE BEST BEE-PAPER.

Please send me sample copy of the API, also price-list of queens if you are still in the business. I am thinking of taking some bee journal and am told yours is the best.

G. A. DEWITT.

Forestville, Ont., Ca.

A FINE SHOWING.

MR. ALLEY: Your queens satisfy me. The one I received last month makes a fine showing already.

MRS. E. E. WHEELER.

New London, Conn.

A FINE GOLDEN CARNIOLAN.

MR. HENRY ALLEY: Please send me one more golden Carniolan queen. The one sent me the middle of last

month is doing finely. She has her frame packed solid with brood now, no scattering mess about it. She was as fine looking a bee when she came as I ever had and I have bought as many as thirty in the past four years.

BOYTON BANTON.

Freedom, Maine.

E. L. PRATT'S PRICES OF PUNIC QUEENS.

For the benefit of those who cannot afford to pay what seems to be fancy prices, we have decided to offer virgins at $1 each, $5 per half dozen, and guarantee their safe introduction. If they are mated with any of the high class drones, excellent bees will be the result.

Directions for introducing and a notice are sent two or three days before the queens are mailed, and if the directions, which are very simple, are followed, there will be no difficulty about introducing them safely.

Following is a copy of the notice sent with Virgin Punic queens:

"In two days please expect your virgin Punic queens; on receipt of this, prepare colonies to receive them as follows: Take three or more combs with some food in, but no unsealed brood or eggs, and put them in a hive, then shake into these combs the bees off two combs at least, from a good strong stock, taking care that the queen is not amongst them. Now remove this strong stock to a fresh stand, and set this new one in its place, which will receive most of the flying bees also.

"Do not use any of the combs from the strong stock, on account of the risk of getting one with an egg or two in it.

The bees must be queenless and have no means of rearing one, forty hours at least, or you will fail to introduce the queens we are sending you.

"As soon as you receive the queens, drop them between the combs amongst the bees, after dark, alone; on no account must they be caged, scented or daubed with honey. In two days sealed brood may be given them, but unsealed brood or eggs must not be given them until the queen begins to lay, or they will be almost certainly "balled" at the entrance on returning from the bridal trip.

Another plan is to make up a three frame nucleus of brood, bees and honey and leave it queenless for three days. On the evening of the third day, tuck a plantain-leaf into the entrance, and give the bees a long and heavy blast of tobacco smoke with one of Mr. Alley's fumigators, so that the bees will drop to the bottom apparently lifeless. Run the queen into the hive and cover the hole so she can not get out. By the morning, the plantain leaf will have dried up and the bees will be O. K. The queen will probably fly out the next day to mate.

When the queen begins to lay, the nucleus can be built up to a full colony by adding capped brood.

For those desiring queens from imported mother, purely mated to imported drones, the price has been set at $5.00 each for the present. Orders are positively filled in rotation.

We shall select some of the finest queens for breeding purposes and can doubtless spare a few at $10. Yearling breeding queens, the best we have at $25 each. Only a limited number.

We were obliged to mate a lot of our first queens to Carniolan drones. If these are desired, the price will be $3 each.

E. L. PRATT.

Beverly, Mass.

REDUCTION IN PRICES OF GOLDEN CARNIOLANS.

In order to introduce the golden Carniolan bees into as many apiaries as possible the present season, we shall mail queens at the following prices after July 15.

One queen, the best we can select, $1.50.

Three queens, all selected, $4.00.

Twelve queens, $13.00.

The APICULTURIST one year and golden Carniolan queen, $2.00.

These bees do not swarm. They are as handsome as 5-banded Italians, very gentle and splendid honey gatherers. They will fill your hives full of bees, sections full of honey, and winter splendidly.

A CURIOUS EXPERIENCE.

The queen you sent me was introduced successfully and commenced to lay finely; was well pleased with the queen and would not have taken $10 for her. But now I come to a matter that I am trying to solve. The colony in which the new queen that had been placed cast a fine healthy swarm. In about fourteen days after the new queen had been removed from said colony, I was working with them and detected a very offensive odor arising from the combs and flies around the entrance of the hive. I examined them and found all their capped brood dead and rotten. I then examined the small colony with the new queen I purchased of you and found her colony in the same condition; the brood that I gave her hatched all right, but the young larva of her own that was capped was all dead; that which was not capped was alive, but all seem to die about the time it is capped. Now it is about a week since I first discovered it; I find upon examination of my other colonies (26 in all) that they are taking the same disease, the capped brood turns brown; the caps fall in, and the larva dies, turns yellow and rots.

Now the question is, is it foul brood? If so, how came it here? The books teach that it is caused by living organisms. If so can it come *spontaneously?* I never saw a case of foul brood; there is none in this county nor never has been and I doubt if in the state of West Virginia. Is it possible it could have been introduced by the queen I purchased of you? Could she have been in contact with diseased bees unknown to you? My apiary was healthy before and doing finely up to the time mentioned. I would not have the disease among my bees (if it is foul brood) for one hundred dollars. Now please give me your opinion in regard to the origin of the disease among my bees and the best thing for me to do. If you can help me out of my difficulty I shall be under many obligations to you. I am not posted upon such things and will look to you for advice. If you think there is any remedy I can apply, send it to me with directions for its application and I will pay all costs or charges for the same.

W. F. STEEL.

Glen-Lyn, Va.

Should say your bees are badly affected by foul brood. No, the queen you received from us did not infect your apiary. If the queen had been taken from a foul brood colony, it would have been a long time before the disease would have developed in your apiary. I do not believe you really know as to whether there is foul brood in your county. In my opinion your bees found some last year, probably a hive from which the bees had died out. Your bees probably all had a hand in the robbery and this, it seems to me, is the only solution of the way your colonies were all diseased at the same time. We have no foul brood in our apiary, if there was we could not rear queens.—ED.]

IF IT IS

NEW POINTS

YOU ARE AFTER,

see that your name is on the subscription list to the API, and send for Pratt's circular.

We have a book giving our new system of Nuclei Management, which we send by mail for 10 cents.

We also have two little books: one on Queen-Rearing, the other on Honey Producing, at 5 cents each, by mail.

E. L. PRATT.

PRATT BEE FARM, *Beverly, Mass.*

THE AMERICAN APICULTURIST.

A Journal Devoted to Practical Beekeeping.

VOL. IX. SEPTEMBER, 1891. No. 9.

CAREFUL HANDLING OF BEES.

If there is one point I would impress upon the mind of a novice in bee-culture more than another, it is to acquire the habit from the first of very careful handling.

While attending a National Bee Convention at Cincinnati, I was surprised and delighted with the good behavior of Mr. Muth's bees. There were about forty colonies on the roof of his store, and there were about as many visitors as could be accommodated in the passage-way between the rows of hives. I do not remember that Mr. Muth used any smoke; I rather think he did not. He opened the hives, lifting out combs, and pointing out the queen to the visitors, who stood closely around. No one present had any protection, and though it was late in Fall, when no honey was being gathered, there was no stinging.

AMIABLE BEES.

Bees came in and out of the store and customers did not appear to notice them more than flies. If a bee touched the hair of one of Mr. Muth's sons, he very gently brushed it aside. I said to one of them: "Do you ever kill any bees?" He said: "Oh, no! if we did, father would go for us."

After inspecting the apiary of Mr. Muth, a party of us took carriages, and were driven to Mt. Healthy to visit the apiary of Mr. Hill. Here I noticed the same thing. While a party stood around an open hive, I kept at a respectful distance, and remarked to a daughter of our host, "I never before saw any bees like your's here in Ohio."

She replied: "It is all in the handling; my brother used to help father, and the bees were very cross; but since I help him, they are not so any more. I work gently, and never jar them, or strike at them with quick motions, and they never get excited." Hives manipulated without snap or jar are most desirable. Our first hives had the frames covered with a board that pried up with a snap, which caused the bees to immediately elevate their tails, and a tiny drop of poison was occasionally seen. When, in lieu of this board, duck or heavy muslin was used, it was a move in the right direction, for this could be peeled back without causing any disturbance at all.

MASHING BEES.

This is another justifiable cause for war, as it releases the poison, and the scent of it angers them. When the clothing of a person has this scent, bees will attack it when near their hive.

In most apiaries of any size, there will often be a score or so of bees which appear to follow war as a business—never apparently going to the field for nectar, but watching the doors for some one to attack. The best way to manage such fighters is to dispatch them at once; a palm-leaf fan is a good weapon; knock

them down and step on them. This is much better than to be annoyed by them for weeks.

BEES DURING A SCARCITY OF HONEY.

Hives should not be opened during a scarcity of honey, unless it is absolutely necessary. Robbers will come around, and then stinging will be in order. During such a time, I have occasionally fed a colony a little for a day or two, and then opened them at a time of day when there was honey in the fields, or when few bees were flying.

To-day I discovered a hive which was queenless, and the moths had moved in; as I took out the moths, I discovered a little honey and the robbers did so at the same time. I let them eat it, as I usually do; if I had taken it away, they would have tried to enter adjoining hives, but let them carry it off and they are satisfied when it is gone. The hive is now desolate, and I shall use the combs in building up small colonies, by removing a comb of brood from strong colonies, giving it to the weak, and putting the empty comb in the place of the one removed from the strong one. If there are any grubs of the bee-moth in them, a strong colony will soon roll them out, to the delight of an old hen, which has the freedom of the apiary.

HONEY CROP IN THE FALL.

All should keep their dishes right side up, for there promises to be a Fall flow. Two years of severe drought killed white clover in many places, and what little bloom there was yielded sparingly. Basswood, too, had its off year in some regions; but abundant rains have fallen, and where beekeepers are located near water courses and swampy, unoccupied lands, honey may yet be gathered. The draining of sloughs on the prairie is cutting off one source of honey supply, for where the plow and reaper go, bees stand but a poor chance. On the rough, stony land of New England, golden-rod blooms in all its glory; it is seen hugging the rocks on every hand, but on arable land there is none. Sweet clover has taken possession of Illinois, and is now the principal source of honey. It does not like kind treatment, but thrives best when run over by wagon-wheels, on rough, gravelly soil.

O. J. FARMER.

American Bee Journal.

HOW TO CLARIFY BLACK AND DIRTY WAX WITH SULPHURIC ACID.

We have been experimenting for the past few days in rendering wax with sulphuric acid. Although we knew the Dadants and one or two others were using it with excellent results in clarifying old dark wax, somehow or other, "we hadn't got around to it." For several months back we have been saving up our old inky pieces of wax, and, besides this, the scrapings from the floor, and other odd accumulations from broken bits of comb. This week we procured some sulphuric acid and proceeded to clarify first the dirty scrapings from the floor, putting them into a copper boiler holding about half a barrel. We first put in about two pails of water, and then about three ounces of sulphuric acid, and afterward the scrapings. We next let on steam, until the wax began to come to the top. We first dipped off the clear wax floating on the surface, and poured it through a cheese-cloth bag. We next scooped out the residue, including the dirt, dumped it into the cheese-cloth bag, put it into our wax-press, and squeezed it under a gentle and increasing pressure. The wax, as it oozed out, ran into the vat, which, upon cooling, proved to be nice yellow wax. On former occasions, the same treatment without sulphuric acid, would give us wax about as black as ink—or, at least, of a very dirty

and muddy color. The action of the acid is to carbonize, or, in other words, burn the organic matter, and this frees the wax that is mingled with it, and allows it to separate and rise to the surface. We have repeated this operation with sulphuric acid on several lots of very dirty cakes of wax, many of them almost perfectly black; and each time, we had, as a result, several nice yellow cakes of wax, and a small pile of black organic matter that had been freed by the acid. We followed the proportions given us by friend Salisbury in a recent article; viz., about a pound of commercial sulphuric acid to about a quarter of a barrel of water. Into this we introduced a steam-pipe, and then filled up the receptacle with the wax accumulations, or dark cakes of wax which we desired to lighten up. Sulphuric acid mixed in water in the proportions given will not make a solution strong enough to be corrosive to the hand, nor dangerous to the bees after it has been remelted and worked over into foundation. We expect to render all our dark wax into nice yellow cakes, so that it may all be of good color and ready for use this fall, or for next season's trade.—*Gleanings.*

ROSIN CERATE, OR BASILICON OINTMENT.

BY DR. A. B. MASON.

Rosin, five ounces; lard, eight ounces; beeswax (yellow), two ounces. Melt together, strain through cotton or linen, and stir constantly until cool.

If the ingredients are clear, the straining can be omitted. As an application for burns, it is "par excellent," and has been used in our family for over thirty years. I cannot speak too highly of it as an application in all cases of inflamed sores or wounds, or inflamed eyelids. Spread thickly on a cloth and apply to the part affected, renewing the application as often as necessary.

To show how valuable it is, I will relate two incidents: A few months ago a neighbor ran a nail into the palm of his hand so far as to raise the skin on the back of the hand. In a few hours the hand began to swell, and be very painful, followed by rapid and painful swelling of the arm. All remedies were a failure until I made an application of this ointment, and renewed it in half an hour. In less than an hour all the pain had ceased, and within twelve hours the swelling had entirely disappeared.

A few days since, another neighbor was bitten on a sore on his hand by a fly, while sitting at the table. The hand soon became painful and began to swell, the swelling extending to the arm. A physician was called in, who pronounced it blood poisoning, but the treatment employed gave no relief.

Meeting him on the street with his arm in a sling, and learning what was the matter, I suggested a trial of the ointment, and gave him some. The next day he was at work as though nothing had been the matter.

I have just received the following recipe. It is tip-top for a cough: Equal parts of unboiled linseed oil, Holland gin and honey. Dose—two teaspoonfuls, repeated as may be needed. I would suggest that the foregoing recipes be inserted in the next edition of the Honey Almanac.

New Philadelphia, Ohio.

AN OLD QUEEN BREEDER'S OPINION OF THE GOLDEN CARNIOLANS.

FRIEND ALLEY: The golden Carniolan queen came to hand promptly and was safely introduced. I am well-pleased with her, have begun breeding from her to requeen my apiary. I have reared and sold many thousands Italian, Cyprian and Holyland queens, but never had one please me better than the golden Carniolan queen received of you.—E. T. FLANAGAN, *Belleville, Ill.*

MIDSUMMER BEEKEEPING.

The enthusiastic beekeeper finds pleasure and enjoyment as well as hard work throughout the season, says the *Indiana Farmer*. At this meridian time of year when the days are longest and the suns rays the strongest, there is much to be done in an apiary if the product be "extracted" honey. If comb honey be the object, and the method adopted be the double hive method, the apiary needs little attention except when filled sections are to be removed and empty ones provided.

But every apiary should yield honey pure and simple, called "extracted" honey, that is, honey without comb or wax. Wax is unfit to be eaten, is indigestible, and was not intended to be used as food. It is intended, rather designed by the Creator, as a receptacle in which the bees might store honey for their own use and preservation. Indeed wax shaped into comb is only the honey storehouse of the bees.

A comb of honey, then, is not all honey, but honey and wax, and wax although useful (worth more than honey) in the arts, is not food, and, therefore the product of the apiary, honey and wax, should be sold separately.

To get the most money from a colony of bees, the honey should be removed often—as fast as it is capped, for frequent removal evidently stimulates the bees. When a comb from which the honey has just been extracted is returned to the hive, the effect on the colony is often wonderful. The odor of honey fills the hive, and every bee seems to be impelled anew. At all events, it has been proved often that a comb direct from the extractor is filled more quickly than a dry comb.

The presence of a little honey, even the odor of honey, in a comb does stimulate the bees to get more and, therefore, more honey comes if it be extracted often. The beginner is warned to be careful in removing combs to a hive. The odor of honey travels quickly in an apiary, and bees from all colonies may be attracted, and the result may be a harvest of stings.

Give the bees shade. If natural shade be lacking make artificial shade. If neither be present, colonies in sheltered places, where there is little or no movement of the air, are likely to "melt down" if such hot weather continues.

The bees are good helpers on the farm, return more in proportion to the outlay than any other workers, and should be made as comfortable as possible. It must be remembered that bees not only gather honey, but, also, that in gathering it, they fertilize all flowers on the farm, thus increasing their product.

Bees need water, and if there be none near, give in a shallow pan with sticks or straws floating on the surface of the water. On these "floats" the bees may drink without drowning. —*Stockwell Exchange.*

AN INTERESTING LETTER FROM ONE OF OUR CUSTOMERS.

Mr. Alley: The two golden Carniolan queens came to hand in good shape. I run one in with tobacco smoke and the other by the cage system. Both methods worked like a charm.

I was examining the colonies to which I introduced the first two queens you sent me. The combs are full of brood and I was surprised to find the queens nearly twice as large as when introduced.

Now a word about your queen-and-drone trap. I do not see how I could do without them. The first two swarms that came out left the hives four times and returned, finally they went to work. I had plenty of others that issued once, and they had the pleas-

ure of skipping back, as the queens could not pass the traps. What could I have done when they came out thick and fast had it not been for the trap?

Those traps were worth $5 apiece to me this season. I have hived ninety-two swarms this year and have not lost one. By the way, that self-hiver is a dandy. Received it at night and the next day secured a swarm as nice as you please and many others. 'Tis sure shot any time. I could go on for a long time praising these traps and queens and not overdo the thing either.

Enclosed find cash for one Punic queen (I must try them), also for four more golden Carniolans.—A. J. Harris, *Anandale, Minn.*

INTRODUCING VIRGIN QUEENS.

Another correspondent wishes to know how I introduce virgin queens which come to me through the mails. Well, I do not *always* do it; yet when I have suitable notice of time of shipment, so that I can prepare for them, I am nearly always successful. Young virgin queens, just hatched, can be introduced much more surely than those which are from two to six days old, as are those which come from abroad. I had an order not long ago for a dozen virgin queens, and after sending half of them, I was requested not to send more, as all had been lost so far; and this was from one of our most noted queen-breeders. Not long ago I saw, in the Canadian Bee Journal, something from friend Jones, on this subject, in which he said that all should know how to introduce virgin queens, or something to that effect; but after reading carefully all that was said on the subject, I failed to find how to do it explained. There are two ways to do this with oldish virgin queens, and *only* two ways, that I know of. The first (and I consider it the best plan) is to make a colony queenless for from four to nine days before the introduction is tried, then drop the virgin queen in honey, looking out that she does not fly away in getting her into the honey, after which she is to be rolled in the same, and, with a teaspoon, dipped up and turned down between two frames from the top of the hive. If the colony or nucleus has been queenless long enough to have sealed queen-cells, not one in ten will be killed, providing said colony does not desire to swarm, no matter whether the queen-cells in the hive are destroyed by the apiarist or not. In fact, as a rule, I prefer not to destroy these cells, for the bees seem to rather let the virgin queen do it. If they have a desire to swarm, the virgin queen will generally be killed in spite of all precautions.

The other plan is to take all the combs out of the hive where you wish to put the virgin, placing the queen in a cage having good candy in one end of it, to an amount sufficient to take from 12 to 20 hours for the bees to eat through to her. By this time they know that this queen is their only hope, so will accept her, but the combs and brood must be kept out of the hive till she becomes fertile; for if put back sooner, the bees will often kill her and raise another from their brood; and they will often kill her if only combs having no brood are placed in the hive within 48 hours after the bees have liberated her. I consider the introduction of virgin queens as impractical, only as we wish to do it as a means of changing "blood." If Bro. Jones makes it practical, will he please tell us *in detail* just how he does it.

G. M. Doolittle.

Canadian Bee Journal.

The introduction of virgin queens to full colonies is certainly impractical. About 2000 young queens, mostly those from six to ten days old, are introduced each season in our apiary, none, however, are ever introduced to full colonies. If to be introduced to the latter the same method of introduction as is used to introduce vir-

gin queens to nuclei would be adopted. Our plan of introducing unfertile queens is this: In all cases the bees must be queenless three days. Then the entrance to the hive is closed with a plantain leaf, and tobacco smoke blown in at the top of the hive among the bees. There is no advantage in introducing the smoke at the top of the hive, but as all our nuclei hives have an inch hole in the cover, this is found the most convenient place to put the point of the pipe we use, and also to "chuck" the queen in.

After giving each colony one good puff of tobacco smoke the queen is given the bees immediately. Not two per cent is lost. Not less than sixty unfertile queens were introduced at one time on Aug. 3, and not one was destroyed, and it took just thirty-five minutes to introduce the lot.—Ed.]

HOW BEES KNOW EACH OTHER.

In "Combe's System of Phrenology," page 281, the following sentence occurs, says a writer: "All the animals which belong to a herd, and also all the bees in a hive, from 20,000 to 80,000 in number, know each other."

The statement in regard to bees is undoubtedly true; but when it is used to prove that bees have the organ of "Form," and recognize their fellows by its exercise, the author only proved that he knew less about bees than about phrenology.

The fact is, that bees do not drive an intruder away or kill him, because they know him to be such by his size, form or color, but because his scent (hive odor) is different from their own.

This is soon found out if we attempt to unite two colonies of bees without the proper preliminary manipulations known to all intelligent apiarists, for a slaughter at once begins.

A peaceful and harmonious union, however, is easily accomplished if the beekeeper first proceeds to "unite" their odor by spraying both colonies alike with peppermint water, or in some other way of his own. Bees thus prepared never fight when united.—*Exchange.*

FORTY COLONIES OF BEAUTIFUL BEES.

Friend Alley:

The Italian queen received July 2 is doing finely; young bees hatching out and they are beauties. I now have forty colonies and they are all first-class. Every person that sees my bees thinks they are the finest bees they ever saw. They are all from your stock. I had a fine crop of sumach honey in July.

A. R. Sargent.

Thayer, Kansas.

WORTH TEN DOLLARS.

I have two hundred and fifty-one swarms of bees; the best bees I have in my yard are from a queen you sent me; she is the most prolific queen I ever saw and the best honey gatherer; her daughters all seem equally as good. She is now four years old and I would not take a ten-dollar bill for her. Bees have done pretty well this year up to date, think I have about 8000 lbs. of comb honey.

G. W. Wirt.

Oronoco.

OUT-DONE ALL OTHER COLONIES.

Mr. Alley: Punic queen received; not a dead bee in the cage.

The colonies which I introduced the Italian queens to you sent me last year out done all my others.

J. H. Brown.

Rochester, New York.

DOOLITTLE CUPS.—CHAPMAN HONEY-PLANT, ETC.

Prof. Cook in *Gleanings* discourses on various little matters as follows :—

Please ask Dr. Miller to wait a little before he comes to take lessons on the rearing of queens in the Doolittle cups. Our last gives eighteen good capped cells and eight destroyed. In some cases all, or nearly all, were destroyed. Our students are now trying the Doolittle method. They have some success.

The Chapman honey-plant is a fraud. Our plants, self-sown two years ago, are weak and of little account. We have two fine fields of rape and three of sweet clover. Our Rocky Mountain bee-plant has failed again This plant will never pay to plant except to throw about in *waste* places. This should be done in August or September to secure the best results.

I am not a chemist, but have no doubt that beeswax can be distinguished from either ceresin or paraffine. Not only is the composition different, but the texture and strength are not the same. We shall soon have these matters (purity of honey and wax) worked out by our Experiment Station. We are only getting a good ready. I wish some Wisconsin beekeeper or other would furnish me some bass-wood honey, say two pounds, where the honey was gathered very rapidly—say 15 or 10 pounds per colony in a day. I have special use for it.

Our reversible frames are not working well. The bees are filling in on the sides below with honey. They never did this before. "One swallow does not make a summer."

The honey-dew is coming from several trees. Lice are very common, and the secretion equally so. Beekeepers must look out.

I should expect no harm from eating poisonous animals like *centipedes*. Even the venom of the rattlesnake or copperhead is harmless if taken into the stomach, though deadly if injected directly into the blood.

We, too, are among the fortunate ones, for Rambler is spending the Fourth with us. As he comes from so many beekeepers, it is like a visit from the whole fraternity.

A. J. Cook.

Agricultural College, Mich., July 4.

Yes, Doolittle's cell-cups seem to be having a hard time this year; as to that matter they always have had a bad time. All bees cannot be fooled in that unnatural way.—Ed.]

NOTES AND COMMENTS.

PREVENTING EGG-LAYING IN THE SECTIONS.

A correspondent wishes to know how brood can be kept out of the section boxes, and why such a state of affairs is more prevalent than years ago.

The above is clipped from the *Am. Bee Journal*. Mr. Doolittle made a long reply to it. If we were to make any reply would say "use the Bay State beehive." Of the thousands of these hives in use, no queen has ever been known to enter one of the sections and deposit eggs therein. This hive was not constructed with a view to prevent the queen entering the sections, yet time has shown that the queen will not leave the brood-chamber and lay eggs in the surplus department. Now, considering no queen excluder is used and the sections are nearer the brood than they can be placed in any other hive in use, this of course is a strong point in favor of the Bay State hive.

This hive has given excellent satisfaction to those who have them in use.

CARNIOLAN BEES.

With this letter I send a cage of Carniolan bees. The mother of them was hatched and fertilized in Germany, and imported by me. Please

compare them with other bees sent to the BEE JOURNAL, and state the difference in color. I say that Carniolan bees are not golden or yellow. I know what I am talking about, for I have imported them at different times. If the Carniolan bees are a golden or yellow color, I have been humbugged. I will say, further, that I have not sold a queen, or offered one for sale; I got them for my own benefit, and so far I like them. I have been handling my bees from imported queens all summer, but never had one attempt to sting me. I use no smoke.

L. HIGHBARGER.

The above taken from the *Am. Bee Journal* is intended for our eye. We fail to find anything in it to disprove the fact that anyone if they so desire can take the bees of Mr. H. and produce beautiful golden Carniolans. How is it, that these bees shipped directly from some place in Europe, presumably from their native land, show yellow bands? Haven't those fellows (Quigly& Co.) been telling us all the while that the true (pure) Carniolan bees have no yellow bands? Now we have the evidence of the editor of the *Am. Bee Journal* that they do show yellow (but not golden) bands. Quigly, Lowmaster, Robinson & Co. will be after Bro. Newman unless he modifies his opinions.

By the way, Bro. Newman, isn't it quite a fine point when you decide between yellow and golden-yellow? Read what editor Newman says:—

"The bees sent by Mr. Highbarger are distinctly marked with yellow bands, but they are not "golden yellow" by any means. They are quiet and contented, and show no excitable motions. When first imported they were called Krainer bees, and several descriptions of them may be found in back volumes of the AMERICAN BEE JOURNAL."—ED.]

We call them golden or yellow Carniolans, either name golden or yellow Carniolan does very well.

We are glad to have an importer of the Carniolans bear evidence that our statement concerning the original color of these bees is correct. Yes, sir, the true color of Carniolans is yellow.

It really looks as though Quigly & Co. were badly used up in the warfare they commenced on the golden Carniolans.

The following extract is from an editorial in the *Am. Bee-Keeper* for July:

THE GOLDEN CARNIOLAN CONTROVERSY.

The *Missouri Bee-Keeper* is improving, but still it continues to deal liberally in personalities, and the AMERICAN BEE-KEEPER came in for a share of its wrath last month It is hardly worth while for us to notice the several sly shots made at us in one way and another in the several different articles concerning us. Such things do not interest our readers, but we will say that we do not deal in queens or bees, consequently have no axe to grind, and our conclusions concerning Carniolan bees were our honest convictions. After a more thorough examination of the subject we are compelled to state that we can find no reasons for changing our convictions. We are not defending yellow Carniolans through any friendship for Henry Alley or E. L. Pratt or anyone else, nor for fear of losing their advertising patronage, as the editor of the *Missouri Bee-Keeper* insinuates, for the advertisements of the gray bees in the BEE-KEEPER occupy much more space than do Messrs. Alley and Pratt, but we believe in fair play and do not condemn a person or thing simply because of a difference of opinion. The whole gist of this Carniolan matter is this: There are found in Carniola both the gray and yellow race of bees. The gray are found in the more elevated portions, while the yellow are found in the valleys. There are hundreds of beekeepers through-

out this country who have and highly recommend the so-called yellow Carniolans, while there are also numerous beekeepers who sing the praises of the gray race. Each have their admirers.

No respectable person or publication can be found defending the course of the *Missouri Bee-Keeper*. The fact is, the editor of the M. B. K. tried to do a smart thing, or, in other words, he is too big for his boots. We hope he will live through it, notwithstanding his discomfiture.

The editor of the *Am. Bee-Keeper* also makes these remarks:

Friend Alley devotes considerable space in the July *Apiculturist* to the *Missouri Bee-Keeper* in response to the unfriendly and uncalled for charges which that journal made against Mr. Alley in its June number. As stated previously we do not approve of such personalities appearing in any journal, but we really think Mr. Alley is justified in returning the attack on his integrity and good name.

A NEW TOP BAR.

C. C. Miller in *Gleanings* writes: "Thick top bars for me, if for no other reason than to keep them straight. I used to say that my top-bars didn't sag, but that was because I didn't look close, and didn't realize how exacting the bees are about spacing.—*Canadian Bee Journal.*

What is there new about them, Bro. Jones? Hasn't the Api been advocating such bars the past seven years? And haven't they been used in the Bay State and hundreds of other apiaries all these years? And weren't they first used and introduced in the Bay State apiary? Well, they were.

SHAKING PALSY OR NAMELESS BEE-DISEASE.

The nameless bee-disease seems to have broken loose again. From the reports that are coming in, it seems to be starting up with unusual virulence in a great many localities, and some write that removing the queen does not bring about a cure. How is this, friends?—*Gleanings.*

The person who claims that by removing the queen from a diseased colony to cure the sick bees gives evidence that he knows nothing about the subject he attempts to treat. Removing the queen will not effect a cure, most any beekeeper should know this. Give the sick bees something they must eat that will effect them immediately. Removing their queen will not. The queen is not diseased, it is the bees that are diseased.

We wonder how many times the salt remedy must be recommended before Bro. Root will tell his readers of a sure remedy for the nameless disease. This "sure cure" seems to have been overlooked by Bro. Root. Many of the readers of the Api have tested it and have pronounced it effective and a speedy cure was effected in every case. Try it, Bro. R., and then tell your readers about it, and thus save them the trouble to write you for a remedy. Two to one Bro. Root will pay no attention to this advice.

GLEANINGS NEW COVER.

How do you like the new design on the front of the cover? This was ordered about a year ago, but we told our engravers to do their level best, without regard to time or cost. The representations of clover, and bees on the wing are unusually accurate. You see the idea. The little gleaners are gathering the sweets from far and near. The golden rods are also excellent, and the whole design represents a handful of clovers, golden-rods, and other bee-plants that have been gleaned on the way. The engravers seem to have held in mind distinctly the idea of a gleaner, or, better, a Gleanings in Bee Culture, and it is no little gratification to us that they have succeeded

in combining so well not only beauty but the eternal fitness of things.—*Gleanings.*

'Tis way up, friend Root. You have beaten us all. The old design of *Gleanings*, however, was good enough.

BAKERS AND HONEY.

As an illustration of the extent to which honey is now being used by bakers, we make the following extract from a private letter just received from the United States Baking Co., Mansfield, O.:

MR. A. I. ROOT:—We have been buying honey from Tuft, of St. Louis, a very fine article, at 5½ and 6 cents per lb. We just bought from him yesterday 92 barrels at 5½ cts., said to be equal to the last lot we bought of him at 6 cts.; if so, it is a very good purchase.

Yours respectfully,
UNITED STATES BAKING CO.
(Crawford-Taylor branch.)

Mansfield, O., July 29, 1891.

Gleanings.

Whew! Look at the price paid for the honey. Five and a half cents per lb., commission, freight and other expenses out. Who can but wonder that the beekeeper is poor?

NOTES TO THE INEXPERIENCED.

Never open the hive and remove the combs of a viscious colony early in the morning. The one who tries the experiment will have reason to regret it. A powerful Bingham smoker will not furnish enough smoke to quiet the bees, and the operator will be badly stung.

Such a colony can be opened in the middle of the day with a small amount of smoke. At this time thousands of bees are in the fields, and they are the oldest and ugliest ones too, and for this reason it is far better to do such work in the middle of the day. When one has occasion to examine one of these ugly colonies, let him do so as quietly as possibly. Be very careful not to kill or injure any bees.

We can handle bees as fearlessly as most beekeepers, but must confess that there are two colonies of hybrid Italians in our yard that are two much for us. These bees were purchased in the spring, and have been used all summer to construct queen cells. The only reason why they have been kept so long is from the fact they build large cells, and rear fine queens. A colony used for this purpose has to be opened often, say once each three days, while it is almost impossible to open either one of these hives early in the morning without getting from one to one hundred stings, it can be done in the middle of the day with very little smoke and hardly a sting.

Our advice to the novice and inexperienced is not to open any of their hives oftener than is necessary.

PUTTING ON SECTIONS IN THE FALL.

Colonies that are allowed to store the fall honey in the sections are likely to be short of stores for the winter. When the sections are removed see that the brood combs are well filled with honey. Each colony you know in order to go through the winter must have at least twenty-five pounds of honey. Sugar syrup if fed the bees early is as good if not better for winter stores than a good deal of the honey bees gather in the fall. Bug juice and honey dew (what's the difference) is pretty bad stuff for winter stores. Such stuff should be removed from the combs, yet it is not always practical to do it; in fact the real bug juice becomes so thick and sugary, it cannot be thrown from the cells when it has been stored in them for a few days. A mild winter, one so warm that the bees can fly often, is the only thing that will insure the safe wintering of bees whose combs are filled with an inferior quality of honey in the fall.

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EDITORIAL NOTES.

PUNIC QUEENS.

We can ship one hundred Punic queens by return mail, and here state that the description of these wonderful bees in the August API is NOT OVERDRAWN.

REMEMBER safe arrival and sure introduction, if directions are followed, are guaranteed. If all is not satisfactory, other queens will be sent.

THE PUNICS.

These bees are not beautiful but they do come up to the claims made for them in the August issue of the API. Have not tested as yet their honey-gathering qualities, but will do so before the next issue of the API, as we now have these bees flying in our apiary.

The workers are strong and vigorous and very gentle, not one bee has attempted to use its sting.

I believe these bees will please all who purchase them. Bear in mind that if you wait till another year before introducing them into your apiary you will be one year behind.

Safe introduction is guaranteed if directions for introducing are followed. Printed directions sent with each queen.

The price is $5 for each warranted queen. No change this year. For prices see page 133.

One selected golden Carniolan queen and the American Apiculturist one year for the small sum of $2. The queen will be worth $5.

THE GOLDEN CARNIOLANS.

A large majority of our orders for queens now are for the golden Carniolans. At the first of the season we used but thirty nucleus hives for these queens, now we have upwards of one hundred. If you cannot afford to purchase the Punic queens, by all means try the golden Carniolans.

This is one of the gentlest, most industrious and beautiful strain of bees in the world.

All who have them state that the queens are large, unusually prolific and beautiful. They are far superior in all respects to the Italians or gray Carniolans.

THE BEE WORLD.

Falconer & Co. have purchased the subscribers' list of the *Bee World*. We really hope the *White Mountain Apiarist* will not have to "go up" in consequence of this sale. Bro. Ellenwood said he received more calls for his journal from the *Bee World* than from all other papers in which he advertised. Had he ever inserted an "ad." in the API he would then realize what a big thing it is to advertise in a first-class publication. Try it, Bro. E.

WILL WAGER A NEW HAT.

In speaking of one of those little western bee-papers, the editor of a well-known bee publication says: "We will wager a new hat that that paper has not got one hundred subscribers." Well, we will bet two new hats that it has not fifty subscribers, and several more new hats that it never will have that number of subscribers. While speaking of new bee papers, we can't help thinking of the reason that induced those fellows to commence the publication of a paper. Did they really suppose they could publish a better paper than other people? That, no doubt, is just what they supposed and appears to be the size of it. Well, a lot of them have tried the experiment and lost their money, and if not richer, are wiser men.

We think the publication of new bee-papers has reached high-water mark, and probably no more money will be

wasted in that foolish way for a long time to come. We tell you, friends, you may as well throw your money in the fire as to try and get rich at publishing a bee paper. It will make little difference where the experiment is tried, the result will be the same.

DOOLITTLE CELL-CUPS.

Although we have been trying hard, for some reason or other we can not make the bees accept the Doolittle cell-cups—at least not more than two or three out of a dozen. This is somewhat humiliating, as others are reporting success.—*Gleanings.*

Same luck as nearly all have who tested Doolittle's method. We have no trouble in getting all the cells we need built and on natural comb, too. Don't try our method, Bro. R., 'tis not scientific enough, you know. Well, this cell-cup business is really scientific? 'Tis so much so that only one in one hundred who tries it can make it go.

HONEY BY THE QUANTITY.

It is said that Vermont beekeepers have produced an enormous quantity of comb honey the past season. Was talking with a dealer in Boston a few days since, and he said that he was offering 11½ cents per lb. In his opinion honey is going to be very low, as there is so much of it.

Manum has sent some fine comb honey to Boston, and it is now in the hands of the retailer.

HOW TO INTRODUCE A QUEEN BEE.

Before the new queen is introduced the colony should have been queenless three days (72 hours). The next move is to destroy all queen-cells.

Insert the cage the queen is mailed in in one corner of one of the brood-frames. Then use the fumigator and smoke the bees a very little with tobacco. Do not blow too much smoke in at one time. Spend about fifteen minutes in the operation. During this time give the colony an occasional puff from the pipe. If the bees are so affected that they tumble down and roll out at the entrance, cease smoking them. The idea is to give just enough smoke to scent the bees and queen alike. Use the pipe sent with queen.

Do this work about sunset. The bees will release the queen by eating out the food.

THE PRICES OF PUNIC QUEENS, FULL COLONIES AND NUCLEI.

QUEENS.

Warranted purely mated, each		$5.00
Tested	"	8.00
Select tested	"	10.00

NUCLEUS COLONIES.

Three L. frames with brood and bees sufficient to build up, including a tested queen $14.00
With select tested queen . . 18.00

FULL COLONIES.

Full colonies, each containing seven L. frames with stores and in good order for winter, safe arrival guaranteed $25.00.

Full colonies with tested queens will be ready to ship Sept. 20.

Tested and select tested queens ready to mail Sept. 10 to Oct. 10.

Address Henry Alley, Essex Co., Wenham, Mass.

REDUCTION IN PRICES OF GOLDEN CARNIOLANS.

In order to introduce the golden Carniolan bees into as many apiaries as possible the present season, we shall mail queens at the following prices after July 15.

One queen, the best we can select, $1.50.

Three queens, all selected, $4.00.

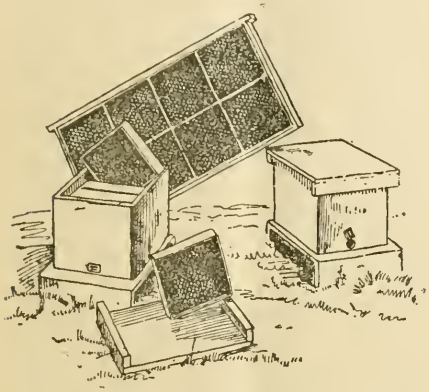
Twelve queens, $13.00.

The APICULTURIST one year and golden Carniolan queen, $2.00.

These bees do not swarm. They are as handsome as 5-banded Italians, very gentle and splendid honey gatherers. They will fill your hives full of bees, sections full of honey, and winter splendidly.

E. L. PRATT'S SYSTEM OF QUEEN-REARING.

Within a few years several young bee-keepers have come to the front, and, by their activity, are making quite a stir in the apicultural world; and although it has a shade of unpleasantness to us old duffers, we shall have, sooner or later, to take a back seat. Among this class of progressive young men is Mr. E. L. Pratt, recently of Marlboro, but who has now located at Beverly, Mass., less than two miles from Bro. Alley.



PRATT'S QUEEN-REARING HIVE.

Mr. Pratt is well known to the fraternity as the editor of the *Queen Breeder's Journal,* which had a short but brilliant career. But Mr. Pratt's pen is not idle, as we often see his marks in the various journals. He has an apiary of ninety colonies, and will run them largely during the coming season in rearing yellow Carniolans. His system is much like Bro. Alley's but his nucleus hive is constructed upon a different plan. The photo shows the hive and frame very plainly. The small frames are made by slitting in two a two-inch $4\frac{1}{4} \times 4\frac{1}{4}$ section, and filled with comb cut from ordinary frames. The little hive contains four of these combs. Eight, as seen in the photo, will fit into an ordinary L. frame, thus enabling the combs to be changed from a nucleus to a full colony, which is a very good feature for rapid manipulation. The little frames, instead of hanging in the little hive, rest upon proper supports in the bottom. Perforated metal is used over every entrance, thus ensuring certainty of fertilization.

At the close of the queen-rearing season, the little combs can be put into a large frame, and several be given to a full colony, with no detriment to the colony, but a kindness to the little pets that have been a profit to us during the beautiful summer days. Mr. Pratt has issued a neat little pamphlet describing his methods, which we judge he would be willing to send to those who wish to give his system a further study.

But train time drew near. Bro. Alley, Pratt and the Rambler, arose from their very pleasant triangular talk, and Bro. A.'s horse hustled us over that half-mile at a lively gait. Our farewells were spoken, and with a final wave of the hand we were soon out of the pleasant village of Wenham, perhaps forever; but we shall ever remember the pleasant hours we enjoyed in the famous Bay State Apiary.

THE WAY ALLEY GETS THERE.

As stated in our last ramble, our thoughts kept dwelling upon the subject of egg or larval queen-rearing, and our cogitations led us into the following review of the question. My first effort to get facts was to write to a large number of noted queen-breeders, from Maine to Texas, irrespective of race, sex, or previous condition. Answers were very

courteously returned, and there was an almost unanimous answer for the rearing of queens from the egg, or, what is practically the same, just hatched larvæ. Only one raised a voice of disagreement, and claimed the 36-hour limit.

I therefore found that, as far as practice is concerned, the large majority were on or close to the egg plan; and the reason advocated was that the larvæ should early receive an abundance of food. The abundance of food is a very good thing to advocate; but upon this point I would give but very little for an opinion or an investigation that goes no further than the unaided eye can reach. Upon turning to our standard text-books I found this visible abundance prominently treated upon with more or less modifying points brought out by closer researches.

I also found two divergent lines of belief. The first class of writers would lead us to believe that especial royal jelly is given to larvæ designated to be queens from the very first moment of hatching. Class No. 2 advocates that all larvæ are fed alike until 36 hours old, and that a coarser food is given to the larvæ destined to become workers. As to which of these two classes is right, is, perhaps, beyond the reach of any one to definitely decide, until further researches are made; but we can quote opinions and tests as far as made, and find indications that point toward certain results.

When the investigator considers the wonderful changes that are effected, or, as Prof. Cook says, the "marvellous transformation—ovaries developed and filled with eggs; mouth organs; the wings; the legs; the sting—aye, even the size, form and habits, all are marvellously changed,"—that all this change has been wrought with merely an abundance of food, or a day's feeding, this, I say, is not a satisfactory explanation to him, and we find him studying the bee structurally, opening up to us a labyrinth of wonders which has been traced but a short distance toward its most intricate secrets.

Cheshire quite conclusively shows that larval food, or, at least a portion of it, is a secretion from the lower or head gland, and that this food has the singular power of developing the generative faculty; but he is silent as to its chemical qualities.

We now turn to Cook, and find, on pages 89 and 117, Dr. A. de Planta quoted as showing from chemical tests that this royal jelly is different from the food of both the worker and drone larvæ.

If the royal food is different, as also hinted by other writers, when is it given to the larvæ? Doolittle, in class No. 2, says, after 36 hours; Cheshire, while substantially agreeing with this class, says, on page 289, Vol. 2, "The fact that queens are started from the egg in queen-cells is suggestive; but in addition it is noticeable that the amount of food given in the queen-cup exceeds that supplied to a worker even in the initial steps." And on page 290, "The larvæ should be intended by the nurses for a queen from the beginning." Cook, A B C, and Alley all stand in class No. 1, and would agree with the above quotation. I, however, find that Mr. Alley, who has been the most strenuous advocate of rearing queens from the egg, is tending toward class No. 2; for on page 171, last volume of the Api he says, "When eggs are placed in a queenless colony, the bees will not in all cases immediately commence to feed the larvæ for a queen." "We also find Langstroth's Revised" standing with class No. 2. As the case now stands, I find that class No. 1 are in the majority, both in theory and in practice; but I also find strong evidence that all classes are not satisfied with the investigations thus far, and would like still further light.

That good queens can be reared by both classes is a fact not to be controverted; and I think queen-breeders of every name and nature can show a long list of testimonials.

But the question ever recurs, Are we rearing the best type of queens? and if not, how shall we do it? The question can be answered only by a more

searching investigation with the microscope than has heretofore ever been made. If we consult Cheshire we find the wonderful head gland No. 1, while fully developed in the worker, is only rudimentary, if at all, in the queen; but I quote: "It is peculiarly important to observe, that the higher the quality of the queen the further will she be removed from the worker in this matter—poor queens, hurriedly raised, really possessing this gland in an extremely rudimentary form, while those with the largest ovaries have even the plate imperforate, and no trace of a duct is discoverable." To the microscopist we must therefore turn for aid. If this duct is entirely absent in queens reared from larvæ 36 or 72 hours old, then they are good enough.

A series of close examinations would certainly teach us at what age to select larvæ for queen-rearing, which would be infinitely better than the present guesswork. Let us employ the microscopist.

RAMBLER.

From Gleanings.

PRATT'S PRICES OF PUNIC QUEENS.

For the benefit of those who cannot afford to pay what seems to be fancy prices, we have decided to offer virgins at $1 each, $5 per half dozen, and guarantee their safe introduction.

For those desiring queens from imported mothers, purely mated to imported drones, the price has been set at $5 each for the present. Orders are positively filled in rotation.

We shall select some of the finest queens for breeding purposes and can doubtless spare a few at $10. Yearling breeding queens, the best we have at $25 each. Only a limited number.

We also have two little books: one on Queen-Rearing, the other on Honey Producing, at 5 cents each, by mail.

E. L. PRATT.

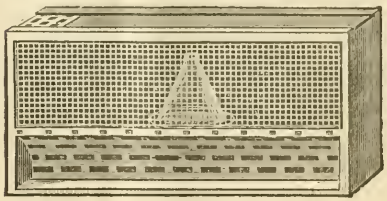
PRATT BEE FARM, *Beverly, Mass.*

Alley's Drone-and-Queen Trap.

SIXTY THOUSAND IN USE.

Prevents swarms from decamping and destroys all useless drones.

R. L. Taylor of Lapeer, Mich., President of the International American Beekeepers' Association has this to say of the trap:



"The drone-and-queen trap I find an indispensable convenience. I should feel like a duck on dry land without it. It saves me LABOR and prevents ANXIETY."

PRICES.

One trap, by mail,	$0.65
Six, in flat by Exp. (one made, seven in all)	2.00
Twelve " " " " " thirteen " "	3.50
APICULTURIST one year and sample trap,	1.10

Address,

HENRY ALLEY,
Wenham, Mass.

TESTIMONIALS.

The traps work finely.
CHAS. E. DOW, *Lawrence, Mass.*

You have perfected a valuable device.
DR. G. L. TINKER, *New Phila., O.*

I have received your trap. All one can ask for.
L. A. READING, *Lambertville, N. J.*

MR. ALLEY: I have just had the pleasure of testing one of your traps. It is certainly *the* thing.
J. W. CARTER, *Pleasant Dale, W. Va.*

1872 Keystone Apiary. 1891

ITALIAN QUEENS AND BEES.

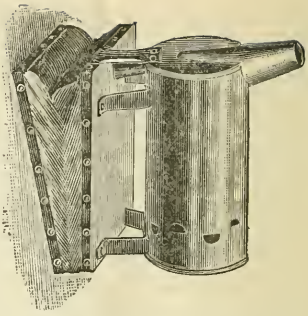
Select, June,	$3.50,	July to Oct.,	$3.00
Tested, "	2 50,	" "	2.00
Fertile, "	1.50,	" "	1.00
6 Fertile, one order,	8.00,	" "	5.00

Send for circular. No Supplies.

W. J. ROW,
Greensburg, Pa.

A6m—Mention Api.

HILL'S BEE-FEEDER AND BEE-SMOKER.



This Smoker burns chips or hard wood without any special preparation. Very reliable. Greatest Smoking capacity. Easiest to start and cheapest because it saves time.

The Best Bee-Feeder. Most convenient for the bees. No drowning or daubing bees. The feed is taken by the bees without leaving the cluster. From two to seven feeders full may be given a colony at one time which will be stored in the combs in ten or twelve hours.

Smoker, 3-inch barrel, Freight or Express, each $1.20; by Mail, $1.40; per Dozen, $10.80. Feeders, One Quart, Freight or Express, per Pair, 30c.; by Mail, 40c.; per Dozen, $1.60. Dealers keeping the above goods for sale, are: C. W. Costellow, Waterboro, York Co., Me.; J. H. M. Cook, 78 Barclay street, N. Y.; A. D. Ellingwood, Berlin Falls, N. H.; F. A. Salisbury, 1635 W. Genesee street, Syracuse, N. Y.; Henry Alley, Wenham, Essex Co., Mass.; W. T. Falconer Mfg. Co., Jamestown, N. Y.; F. H. & E. H. Dewey, Westfield, Mass.

Address, A. G. HILL, Kendallville, Ind.

ALL GOOD

Friends, if you need fine warranted ITALIAN QUEENS, in May and June, $1.00 each, give me a trial order. I send out no queens that I would not keep myself. They are reared in Swarming colonies, unwarranted, 75 cents.

MRS. JENNIE ATCHLEY,

Box V. FARMERSVILLE, Texas.

PASTEBOARD BOXES

FOR ENCLOSING COMB HONEY.

Crawford's are the best.

Send for new price list.

A. O. CRAWFORD,

Norfolk Co. SOUTH WEYMOUTH, MASS.

A FREE TICKET TO THE

WORLD'S FAIR

would surprise every Beekeeper; so will our Catalogue of Apiarian Supplies, for it contains many things to be found in no other.

QUEENS, BEES, HIVES,

best quality, best queens, best bees,—in fact the *best* kind of supplies.

☞ Send for *Free* Catalogue to-day.

R. STRATTON & SON,

HAZARDVILLE, CONN.

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Establishment of Gaiani, Bonaghi & Co.

IMPORTED ITALIAN QUEENS.

We are prepared to ship our fine Queens to America at the following prices:

April and May	June and July	Aug. Sept. & Oct.
10 Francs.	8 Francs.	6 Francs.

Special prices for Swarms and Hives. No orders for less than 8 queens accepted from America.

Address, MR. NEPPI,

MODONA, Barbaziana, Italy.

Something to Talk About.

FOUNDATION made at Syracuse, New York, by E. A. Salisbury. He has the best facilities for the

MANUFACTURE OF FOUNDATION,

and can ship medium brood, thin, or extra thin surplus promptly. He can make heavy brood to order. He also handles all the APIARIAN SUPPLIES manufactured by

A. I. ROOT, at Root's Prices.

Our foundation is kept for sale by Henry Alley, Wenham, Mass., and by the Model Bee Hive Co., West Philadelphia, Pa.

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The Nebraska Beekeeper,

A Wide Awake Monthly Journal devoted to Apiculture and the home with its surroundings.

50 cts. per year. Sample copies free.

STILSON & SONS, Publishers,

YORK, NEB.

COMB-FOUNDATION MILLS.

Made by W. C. PELHAM,

A6m Maysville, Ky.

In responding to this advertisement mention Api.

MASSACHUSETTS AGRICULTURAL COLLEGE

THE AMERICAN APICULTURIST.

A Journal Devoted to Practical Beekeeping.

VOL. IX. OCTOBER, 1891. No. 10.

AN INTERESTING LETTER ON INTRODUCING QUEENS.

F. O. BLAIR.

FRIEND ALLEY: Permit me to thank you for giving so much time and space in the API to discussing the best methods of introducing queens. My efforts in the way of beekeeping have come nearer to failure in introducing queens than in any other process of manipulation. I have supposed that my want of success had been largely due to my clumsiness or awkwardness or want of care; but if such an experienced apiarist as A. I. Root loses 25 per cent of queens in the process of introduction, as he himself confesses, my case is not altogether hopeless.

It is exceedingly annoying and not a little vexatious, when you have paid a high price for a choice queen, to have the bees, when you undertake to introduce her to them, consider her of so little consequence that they kill her outright, hug her to death out of pure affection.

By the way, I now see that I was on the very verge of an important discovery nearly a quarter of a century ago. It was in the early days of the Italians, and I paid $20 for a very rare queen. Of course, I was very anxious to introduce her safely, and disposed to take all possible care to avoid failure.

I removed the queen from a fine strong colony, waited till all the brood was too mature for them to start a queen-cell, carefully cut all the queen-cells out which had been begun, and then caged her majesty and placed the cage for several days between the frames for mutual conference and acquaintance. When I was ready to let her loose, in order to make it absolutely certain that no queen cell had been overlooked, with tobacco smoke I drove all the bees off the combs into the bottom of the hive, and gave the whole a careful re-examination. I then let the precious madam run down into the hive, still reeking with the fumes of tobacco. That introduction was a splendid success; and since reading your experience I have no doubt the tobacco smoke largely contributed. Could I have put this and that together, I, too, might perhaps have learned how to introduce queens with tobacco smoke. I am as much opposed to the use of tobacco for myself as A. I. Root is, but I know it is good in handling bees.

The new ideas I have gained by reading in the API, the best methods of introducing queens, will be of great value to me in the future, I surely believe, and I expect to have much better success in days to come.

Trinidad, Colorado.

The first queens we ever introduced were treated exactly as the method given in the Sept. API. We are using the same pattern fumigator (no improvement in it) that was used in our apiary some thirty years ago. It is impossible to lose a queen by that method. At any rate, when directions are followed, we are ready to guarantee safe introduction of all Punic queens we send out.—ED.]

UNITING BEES AND INTRODUCING QUEENS.

FRIEND ALLEY: Could you kindly answer in Oct. issue of API the following questions as to introducing queens.

I have reared a fine lot of queens from the queen I purchased of you. They are in nucleus colonies and I wish to introduce these queens, taking the combs with adhering bees and queen, and put them into queenless colonies.

Now what I wish to know is: 1st, How long must the colonies be queenless at this time of the year before I can introduce these nucleus colonies (combs, queens and adhering bees) and how should I introduce them, with or without smoke, and should the combs of the nucleus be alternated with the combs of the queenless colony or would it be best to place the nucleus colony in the centre of the queenless colony? 2d, Is it necessary to have these nucleus colonies on a stand above the colonies to which you wish to introduce them or can the nucleus be picked up from any part of the apiary and introduced to any colony as per your answer to the first question. Briefly, I wish you would kindly tell me in Oct. API how you would introduce a nucleus (*combs, queen and adhering bees*) from any part of the apiary to any colony in any part of the apiary after the honey season.

Please explain fully as to "how" it is done, for I am sure that many others are also interested in the above subject; especially if they raise such fine queens from queens purchased of you as I have.

LEWIS C. JAESSING, *Maumee, Ohio.*

1. The full colonies to which you propose to introduce the queens, bees and brood should be queenless three days. When ready to make the change, remove as many combs from the full colonies as you have frames of brood to insert in their place. Place all the brood as near the centre of the hive as possible. Use more or less tobacco smoke on both nucleus and full colonies. When the change is made it would be well to smoke both nucleus and full colonies some ten or fifteen minutes before the transfer is made. By so doing all the bees and combs of both hives would be scented alike, and thus reduce the danger of the bees fighting. However, there is not much danger of the bees killing each other under such circumstances, as the queenless bees will welcome the bees and queen that are to be united to them.

2. No, it is not necessary to have the nucleus colonies near the queenless colony. After the bees are united, very few will go back to the old location, and what few do return to the old stand would be the oldest ones.

Towards the last of September will be the best time to unite the colonies. Do the work during the latter part of the day, as the tobacco smoke might induce robbing if done earlier in the day, especially if the weather is warm.

To sum up: When you get ready to transfer the bees, dequeen the full colonies and any time after three days unite the bees.—ED.]

NON-SWARMING BEES.

MR. ALLEY:—Enclosed find $5 for one Punic queen. I will risk it, as I have found that all you say about your queens is correct. Your bees are non-swarmers, good honey gatherers: in fact, they are all you claim for them.

ROBERT INNES, *Beachville, Ont., Ca.*

How does the above strike those friends who have so much to say about "humbugging in the queen business?"

GOLDEN CARNIOLANS.

FRIEND ALLEY:—I have a colony of beautiful golden Carniolan bees from the queen I bought of you. They are smart and industrious, and from present indications I think they will prove to be what you claim for them,—a grand strain of bees. I will fully test their honey gathering qualities. I must have a Punic queen next summer.

JOHN D. A. FISHER, *Woodside, N. C.*

AMERICAN APICULTURIST

PUBLISHED MONTHLY BY

Henry Alley, Wenham, Mass.

Established in 1883.

SUBSCRIPTION PRICE, 75cts. PER YEAR.

Entered at the P. O. Wenham, Mass., as second class mail matter.

EDITORIAL NOTES.

WINTERING BEES.

Instructions on this point need not be long. Plenty of bees, and that of course, means good queens, plenty of good honey or sugar syrup, and warm, dry quarters. See that the food is supplied before too cold weather, and that the bees are fixed up before winter sets in.

THE SEASON OF 1891.

The bee and honey season of 1891 has passed. After fixing the bees for winter, what next? Now let us lay our plans for 1892. Spend all leisure moments in winter getting things in order for the coming harvest. Write your bee experience and send it to the API and see how nicely it looks and appears in print We tell you friends, if you desire to crowd out of the API what space the editor occupies, just send in some good articles, and they shall have the room instead of our own. You see how easily you can get rid of our "stuff."

FRANK BENTON.

This gentleman may now be found in the Apiarian Section, Division of Entomology, Washington, D. C. Should say that Mr. B. is the right man in the right place. Bro. B. got a little put out with us some ten years ago. We never knew what the trouble was, and, to say as little about it as possible, we never cared. However, we are willing to forget and forgive, and now let it all pass.

BEES AND FRUIT.

Gardeners and fruit growers begin to realize the worth of the honey bee to them. The fruit farmers who are ignorant of the habits of the honey bee are continually finding fault with their best friend. Were it not for the honey bee, little or no fruit would be raised some seasons. When trees are in blossom and it rains nearly all the time, the honey bee puts in its work. Let the sun peep through the clouds for a moment and thousands of bees will be in the trees. It is under such circumstances that the bee is the fruit-grower's benefactor.

That new title-page of *Gleanings* is a gem of art. For solid wear, however, month after month, nothing equals a very plain title-page with little besides the title, says Dr. Miller in *Gleanings*.

The Dr. had his mind's eye on the title page of the API when he penned the above.

KEEPING DRONE BROOD.

We queen-breeders, says G. M. D., often want to keep the very last eggs laid by the queen of our choice in drone-cells, so as to have a very few fine drones late in the season. By hand-picking these, after all the other drones are killed off, we can have things our own way as to the mating of our queens. Now, I find that drones reared in July "play out" before October; hence, to have good strong drones in October they must come from eggs laid during the early part of August. I have no difficulty in getting these eggs during the last of the honey harvest; but to get the bees to perfect them to living drones is where the trouble lies. Last year I tried placing these in a queenless colony, but only about fifty drones was the result out of about as many thousand eggs. This year I tried putting them in a populous colony which had lots of honey, putting them over the queen-excluder, in the second story, where I raise my queen-cells. This did better than last year, yet the bees destroyed over one-half of the eggs. Who, in a locality similar to mine, where basswood is the last honey crop, can tell me how to rear and keep drones during August and September?

Well, friend D. can't you do better than that? Our plan to secure and preserve drones late in the season has been to place a frame of nice drone comb in the centre of the brood-nest of the colony the drones were to be reared in. The comb is then left till nearly all the brood is capped, it is then removed and placed in a colony that has no queen, but plenty of queen cells.

Nearly all the Punic drones Bro. Pratt and ourselves have used this season were reared in the Bay State apiary. We still have a fine lot of them. There are now (Sept. 20), about 1000 capped drones in our best golden Carniolan colony. If Brother D. will read our work on queen-rearing he will find therein a method for "rearing and preserving drones late in the season." Try it, Bro. D., and you will have no further trouble in the line of which you complain.

By the way, Bro. D. told us last winter that the drones reared late in the season would live over till the next March or May. We claimed that they would not.

Now, Bro. D. says, in the above, drones reared in July "play out" before October. Well, they will, and thirty days, at least, before October comes in. Drones reared late in August will hardly see October. That has been our experience.

PUNIC BEES IN ENGLAND.

A writer in the *Canadian Bee Journal* says Punic bees are not advertised in any English beepaper. Nothing strange in that, and the reason therefor can and will be given later. A good many things used by American beekeepers are not advertised in English beepapers. We have the Punic bees all the same. Will say too, that Punic bees are advertised in some of the papers published in England.

Mr. John Hewett of England, the man who imported the first Punic queens from Africa to England, and afterwards sent them to America, is now roundly abused for being so enterprising and for attempting to do his English beekeepers a good service. We had an idea that some American beekeepers had a monopoly of such contemptible business, but it seems we were mistaken.

CONFUSION OF THE RACES OF BEES.

Several parties have said there are no golden Carniolans. Now comes a man who says there are no Punic bees. Let some one arise and say there are no Italians, no black or hybrid bees. That, it seems to us, would settle it. Let some beekeeper get up and make an exhibition of his ignorance of these things and the dispute will soon be settled. So far as we know, not one of the parties who claim there are no yellow Carniolans and no Punic bees have ever investigated or had any experience in the matter. Now the best way for D. A. Jones, W. Z. Hutch., C. J. Robinson, and a few others to settle this question is to try our method for producing yellow Carniolan bees. By so doing, these friends might have some excuse for the baseless remarks they are continually making.

THE HONEY CROP OF 1891.

Is it a large or a small crop? We confess that reports received are greatly mixed. Think we had better put it down as an average crop and let it pass. The Vermont beekeepers have sent a fine lot of honey to that city. There has been nothing like it seen in Boston for several years. It can be purchased, by the crate, at about fifteen cents per lb. It will probably net the producer twelve cents per lb.

BREEDING AND IMPORTING NEW RACES OF BEES.

New strains and new-fangled notions in reference to bees, says D. A. Jones, seems to be the order of the day. Mention a way in which bees may be improved, and it will not be long before you will find somebody advertising something, which they claim possesses wonderful merits.

There seems to be a disposition in the direction of a craze for bees that will

winter well. If memory serves us correctly, it was not many years ago that a certain gentleman in the United States advertised that he had wonderfully hardy bees for sale that would winter in- or out-doors, in good or bad hives, under any and all circumstances. The following winter proved conclusively, however, that such was not the case, and that a person, to be convinced, had only to gaze upon his empty hives in the spring.

We would suggest that, as a public safeguard and a guarantee of good faith, any one, having bees which they claim to be superior to all others in any respect, should send a colony or two to Professor Cook, or some of the leading apiculturists of the North American Beekeepers' Association, appoint a committee to test their qualities, and if they are superior in the various points claimed, that they be either awarded a diploma and the right to charge so much a colony, for a certain number of colonies, these to be distributed at the various convenient points throughout North America for breeding purposes, or that the party receive suitable government recompense, and give them to reliable queen-breeders at special rates. The breeder in turn to sell the queens at a price that will be within the reach of every beekeeper.

It strikes us that D. A. Jones is the last man in the world who should make such an attack on his more enterprising neighbors. We deny that "new-fangled notions in reference to bees is the order of the day." There is no "new-fangled" notion about it. We believe the beekeepers of the present day are as intelligent as they were the year D. A. Jones sent those worthless Cyprian and Holy Land bees all over America. Does D. A. J. suppose American beekeepers have forgotten the prices charged for those, the meanest of all races of bees? Now that he has realized all that one can from such an enterprise, he (Jones) intimates that the government should have a hand in fixing the price on queen bees that some one in America has had push and enterprise enough to procure. How is it that D. A. J. did not think of these things when he was charging from $5 to $10 each for queen bees that were not worth the postage that it required to mail them from Canada to America?

HERE IS ONE OF JONES' IDEAS.

"Mention a way in which bees may be improved, and it will not be long before you will find somebody advertising something." Yes, you will, and that somebody is an American, or Yankees as some call them. We do not hide our light under a bushel. The "Yanks," as the rebels used to call us, are wide awake and up early in the morning. No dead-and-alive people here Bro. Jones. I there is anything that needs pushing Americans are the ones to push it..

JONES AGAIN.

"If memory serves us correctly, it was not many years ago that a certain gentleman in the United States advertised that he had wonderful hardy bees for sale . . . . . The following winter proved conclusively, however, that such was not the case."

What does Jones know about this matter? Just what he has guessed at. 'Tis a made-up-as you-go statement to fit the subject and make out a case. There is not a particle of truth in the above statement, as it would be impossible for Jones or any other person to get correct reports of such a condition of things.

JONES' INCONSISTENCY.

"Now we fancy there is a disposition on the part of someone to make a boom for a season or two on a special kind of bee, and by the time the public learns that this new bee is a hollow mockery, they can jump off that hobby upon a different one."

Are the people referred to booming their goods to a greater extent than D. A. Jones does those he has for sale? How about the Jones hive and some other hives that have been boomed so much the past four years in the *Canadian Bee Journal?* Hasn't one person as good a right to boom his goods as another?

MORE OF JONES' INCONSISTENCY.

We remember of reading in the *Canadian Bee Journal*, and but a few years ago, too, a notice of a wonderful implement for the apiary that was soon to be launched upon the beekeeping public. Why, this wonderful invention was intended to startle the beekeeping world from Australia to Canada; not one word as to what it was would the great inventor lisp until he had worked the people up to a high degree. "Just wait and see what it is," said Jones. Well, all waited; they had to, you know. What was this wonderful invention? How many have forgotten it? Nothing more than a bee-feeder. Well, no one went mad over the announcement when made unless it was D. A. J. on account of its flat failure. Yet we will bet a few cents that the inventor was more surprised at the cool reception his invention received than were the beekeepers of America when informed of the wonderful machine. We only speak of this fact to show up "new-fangled notions and the disposition on the part of someone to make a boom for a season or two on a special thing, and by the time the public learns of the hollow mockery, they can jump off that hobby on to a different one." See?

For Heaven's sake, when did D. A. Jones reform?

Please put the above question under the head of "Queries" in C. B. J. and let its readers guess at the conundrum.

Jones' suggestion to let the north American Beekeepers' Association appoint a committee to test the qualities of new races of bees sounds well, now that he (Jones) is not in the business of importing *new* races of bees. It rather gives you away, Bro. Jones. You are too late with your kind suggestion as well as in expressing your solicitude for the poor American beekeepers—none of them, Bro. Jones, will be swindled any more by purchasing golden Carniolans and Punic bees than were those who purchased Cyprian and Holy Land bees of you. If there is anything in this world that makes us feel mean it is our connection with the business of rearing and selling Cyprian and Holy Land queens. Bro. Jones, your remarks as quoted above were inspired by jealousy. You seem to be all cut up because some one in America has got in ahead of you and introduced the Punic bees.

If you did not approve of the things you so strongly condemn in the above quotations, why did you admit to the columns of the *Canadian Bee Journal* that long description of this latest new race of bees—the Punics? If you really had a desire to crush out new-fangled notions of whimsical beekeepers, why didn't you throw that description of these wonderful bees in the waste basket?

Your remarks, Bro. Jones, as given above, is an insult to every beekeeper in America. I believe the beekeepers of this country can read and decide as intelligibly as to what they need and want as D. A. Jones, hence the insult. Most any beekeeper could decide as to whether a race is good or bad as well as Professor Cook. We have sold a large number of Punic queens, and they are giving good satisfaction. Will say for the benefit of D. A. Jones, that these bees are very promising, very much more so than any new race introduced here. Jones would think so could he see them at work carrying pollen and honey from golden rod. These bees dodge out and in at the entrance of the hive so quickly it is almost impossible to see them. Every good feature mentioned of these bees, as described in the August API has been sustained.

Notwithstanding Bro. Jones' condemnation of "new-fangled things" we shall continue to rear and ship our golden Carniolan and Punic queens as heretofore. Every new thing in beekeeping that we can invent will be "boomed" for all it is worth. We find it pays to advertise in the API and so do others whose ads. appear in our columns.

Now, Bro. Jones, when you have gotten the mote out of your own eye, then make an effort to get it out of the eyes of your neighbors.

While Bro. Jones is a little inconsistent, there is much found in the *Canadian Bee Journal* we commend. Speaking of new strains of bees, Bro. Jones says: "Better call them by their right name, and call them good bees. We care not what the name is, so long as the bees bring us plenty of dollars and cents."

That is right, Bro. Jones; now when we speak of the golden Carniolan bees we call them by the right name, and also call them good bees, which they are.

Let's see, 'tis Bro. Jones who says he can keep the dark Carniolans pure on that island where he didn't keep the Cyprians and the Holy Lands pure. Bro. Jones, there is not a person in the world who can keep the Carniolan bees a pure dark color. There is no more fixed purity about the dark Carniolans than there is about the Italians. The question of impurity of the Italians was long ago settled.

Italians are hybrids. They are naturally a dark race and are mixed with (yellow) Carniolan. It is easy enough to keep the yellow Carniolans yellow, but no one has ever succeeded in eradicating the black tinge from the Italians.

FROM AMERICAN BEEKEEPER.

Bees enter the hive best against the wind. Most of the wind and rain comes from the west. If the lay of the land, etc., is convenient, the hives should face the east. The next best position is to face them to the south.—(J. H. A.)

We wonder if J. H. A. speaks for the whole country. Here in New England the rains, with the exception of a few summer showers, come from the east, that is, points between north and south *via* east. We face our hives west, and the bees have no trouble to get out and in.

FROM STRAY STRAWS IN "GLEANINGS," SEPT. 1.

The *Review* says: "The *Apiculturist* for August is but little more than a great big booming circular for the business of E. L. Pratt and H. Alley." Now look out for the API, saying, "The *Review* for September is but little more than a great big booming circular for the Heddon hive."

The *Review* is right. That was just what was intended, and we can assure the editor of the *Review* that it was a success in every sense of the word—we received orders for more than 100 Punic queens, 200 yellow Carniolans, 150 Italians, and quite 200 new subs. to the API. Now, if that is not a successful boom what do you call it, Bro. Hutch.?

Bro. Hutch., why don't you try and boom your paper? Don't be wasting your time over a few hundred subscribers. Get up a boom and show a little more enterprise.

By the way, why shouldn't we boom our goods in the API and in our ads? We pay the bills, and what is more, we cannot boom them in the *Review*. We paid Bro. Hutch, five dollars for an ad. but none of his readers ever saw it; not a word came from it. Now, how very different our experience has been with ads. inserted in the *American Bee Journal*, *American Beekeeper* and *Gleanings*. We have no idea how many subscribers the *American Bee Journal* has, but I can say this about it, all of them, it seems to me, read the advertisements.

Now to come down to solid business, isn't every paper Bro. Hutch. issues a boom for its editor and proprietor?

Do you not do your best to hold your subscribers, and to get others in each of your monthly issues by making a good paper? That is what all editors are doing. Every paper sent out by any publishing company is intended as a "boom" for those who are concerned in its publications.

FALL HONEY.

Bees worked on golden rod here during the early part of September. They did not seem to gather as much as they usually do in the fall, though we

never saw the bees work smarter, nor the weather more favorable.

ORDERS FOR QUEENS, ETC.

Up to date (Sept. 20), we have had orders for queens from six hundred and forty beekeepers. Ten hundred and forty-seven queens have been mailed since May 20, leaving orders on our books for about one hundred and twenty-five queens. Of the number of queens sent out fully five hundred were golden Carniolans. (The exact number will be given in the November Api.)

We still have a few queens ready to mail or enough to make this year's shipments reach 1,300 in all.

Those unacquainted with the work of rearing queens have but little idea of the amount of labor required to rear and ship such a large number. Considering that our apiaries for the different races are situated several miles apart, and also that it is necessary to go to each yard as often as once each day, and very often to all the yards several times a day, you must know that our hands have been kept pretty busy all the season, from May 1 to Oct. 1. We have had not over two days' help during the entire summer.

In addition to the above we have done the work of the Api; registered every order and written several thousands of letters; nearly fifty letters each week.

A LARGE ORDER FOR GOLDEN CARNIOLAN QUEENS.

One man has ordered fifty golden Carniolan queens of us. As our friends, the enemy, will say this is some of Alley's bragging, we give the full address of the party who sent the order—W. C. Lowton, Staten Island, Walnut Grove, Cal.

If J. C. Robinson has any knowledge of bees, he has kept it well from the public eye. He tells us all about the golden Carniolan bees, yet he has never seen one. The fact is, he is a disturber of the peace, and in order to make out a case against a person jumps over all decency and fairness. That he does not value his word for truth and veracity, is evidenced in any of the articles he sends to the bee-papers.

PREVENTION OF SWARMING.

Rev. W. P. Faylor says in the A. B. J., "The more we keep our bees from swarming, the less will they be inclined to swarm in the future. The instinct of the bee can certainly be improved."

This is a subject that has been talked about very recently in the Bay State Apiary. The question is, How shall we prevent swarming? We have noticed when swarms issue through a drone-trap once or twice they get discouraged and will not try it again the same season. There is no mistake about the fact of discouragement. Place a trap on the hive; let the bees issue through it twice; then destroy the queen cells and allow the old queen to return.

There is no doubt that the swarming impulse can be bred out of any race of bees in the course of a few years' treatment in the right direction.

THE GROWLERS.

Once in a while a customer gets out of patience and threatens to have us shown up in certain bee-papers. One man in Denver, Colorado, sent an order for a small saw and two queens. The name of the street on which he resides is *Wazee*. We could make only *Wayne* out of it in the way it was written. There was some delay in getting the saw made but the queens were shipped promptly, and as the name of the street was incorrect the queens were not received, nor heard from. The saw was sent but as no name of street was written on the package, that was returned to shipper. Well, the man howled and wanted his goods; but as he did not give his

correct address none of our cards or letters sent him were received.

When the correct address was known we received a threat that he would publish us in *Gleanings* if we did not fill his order at once. "Go ahead and publish was our reply, or withdraw the threat." Now we are about two dollars out of pocket, and the man did not get his goods and for no other reason than making the word Wazee read like Wayne. It was not our fault in any particular, yet we suffered all the annoyance and lost our goods through his carelessness, and now he threatens to expose us. Rather unreasonable.

THE API AND BEEKEEPER.

We have been so kindly treated and so well supported by the *American Beekeeper* in the yellow Carniolan controversy, that we really desire to do as much as possible toward building up the subscription list of that paper. We know of no better way to do so than by mailing the *Beekeeper* and APICULTURIST one year for one dollar.

The API will be mailed from Nov. 1, 1891, to Jan. 1, 1893, to all who accept of the above. We have made no arrangements with the *Beekeeper* for doing so, but have no doubt the subscription to that paper can begin Nov. 1, as well as the API. Now, friends, the *Beekeeper* is a good paper. Its editor is not afraid to give his opinion on any of the questions of the day, nor will every article sent to the *Beekeeper* find room in its columns. We are knowing to the fact that several parties have tried to use the *A. B. K.* in which to give vent to their spleen. But the editor says *No.* So these parties applied elsewhere, and if you read some of the bee-papers printed here in America, you will have no trouble in placing your eye on one or more of those rejected articles.

THE GRIPPE.

Bro. A. I. Root has had the Grippe. Editor Newman had it several times and Bro. Root only laughed at him for making such a fuss over so small a matter. Whose turn is it to laugh now?

One C. J. Robinson, is doing his best to kill us off, that is, our business. Such cowardly attacks as that by this man as appeared in one of the bee-papers, never can hurt anyone. Robinson cannot write an article on bee culture without trying to do some one an injury. I am happy to say that there are editors even of bee-papers who will not use the scandalous and mean emanations from Robinson's cranky brain. Wonder how Editor Newman came to break over his usual rule and admit to his columns an article which he well knew was full of falsehood, misrepresentation and downright insult.

IMPORTING ITALIAN QUEENS.

It has sometimes been questioned whether there is any use of importing queens from Italy, says the editor of *Gleanings*. We think there is no use to send to Italy for hybrid queens. Plenty of such can be had in this country and at much cheaper rates as well as a better class of queens. If any one has ever received what is considered a *pure* queen from Italy, let him speak up loud enough for all to hear.

HOUSE-APIARIES.

It is our intention to experiment a little this coming winter on a house-apiary. Shall erect a small building and so arrange the interior that it can be heated to a temperature of about 90°. No artificial heat, however, will be used till the latter part of March, or until the bees have had several cleansing flights in the spring. What all northern queen breeders need are large colonies about the first of May to rear their early queens. Now we propose to force brood rearing so early that the hives will be full of bees at the last of April. This can be done in a warm room, provided the temperature is kept at the proper degree for several weeks in succession. The hives will be arranged in two rows, one above the other, with room enough between to easily lift the combs out if need be. The brood-chamber alone will be placed in the bee-room. Until

the heat is applied a mat and cushion will be kept over the frames. When the temperature is raised the cushion and mat will be removed and a wire cloth honey-board placed on in order to give ventilation to the hive. Water and artificial pollen (wheat flour) will be supplied the bees through the wire at the top of the hive. The room will be kept as dark as possible.

BEE NOTES,

Let no colony go into winter quarters with an old queen. Such queens play out early in the spring.

If your bees are wintered on the summer stands, place them at least from eighteen inches to two feet above the ground.

Do not contract the entrance to the hive in winter. Let the bees have all the ventilation possible about the bottom of the frames. That is where the combs commence to mould very early. A cushion filled with cut hay (say cut to about one or two inches long) is the best protection over the combs in winter. Chaff, and other close material do not let the moisture from the bees pass off as freely and as readily as hay, and the combs are more likely to mould.

ALL SORTS.

A beekeeper in Argyle, Wis., considers the common black bees the best. He's behind the times.

The discussion over closed-end-frames has a rest. What will come up next? Now keep busy making hard talk about the Punic and yellow Carniolan bees.

If rain can be produced by a great noise, why not send C. J. Robinson skyward? He can create about as much useless noise as anyone. Would'nt there be a down-pour of abuse, slander and misrepresentations though?

Someone in the *Canadian Bee Journal* gives a method for making foul brood combs safe without melting down. Let him tell it, but don't take any stock in what he says or use such combs in your apiary, you will regret it if you do use them, as they are full of disease.

A LITTLE MIXED.

We saw in a bee paper an item headed: "A good season in New York." The writer goes on and says "the bees have done nothing here; a great many beekeepers are becoming discouraged," etc. That don't look much like a good season, does it Bro. Jones?

An enthusiastic apiarist, living at Kirton, mounted on a safety bicycle, followed a swarm of bees for two miles on Wednesday afternoon, and after safely hiving the wanderers, returned home with the skep containing the numerous living freight securely fastened to the frame of his machine.—*Gleanings.*

When our bees "abscond" they cut across lots. If we had a bicycle we could not catch them. When we can own and ride one the bees will be taught to keep the road as did the bees of our enthusiastic apiarist.

CHEAP QUEENS.

Don't those fellows who are advertising tested and untested queens at such low figures "give themselves away" in so doing? It really seems to us that if they reared and shipped first-class queens, they would not be obliged to put prices so low. Rear less queens and better ones, and get a higher price for them is our advice.

THOSE CELL CUPS.

Bro. Root has succeeded once more in making bees accept of Doolittle cell-cups. Don't forget how it was done, Bro. Root. There are a good many ups and downs in Medina with the cell-cup business. If Bro. Root really desires to help Doolittle he should not speak of the failures in rearing queens by the cell-cup process.

THE PUNIC BEES.

Probably there is no question at this time that will please our readers more than to relate our experience with the Punic bees. It is claimed that the Punics are the hardiest race of bees known. That this is true no one will doubt, when they have read this article. Now the following points clearly show that the statement of hardiness is true. Not far from 300 young Punic queens have been reared in our apiary since Aug. 1. It is well known that *all* our queen cells are placed in nursery cages and the queens allowed to hatch therein. A good many of the cells from the Italians, especially those in the lower corners of the nursery, will not hatch, as the temperature is not quite high enough. All the Punic cells were placed in nursery cages, and not one cell in fifty failed to hatch. This is one strong point in favor of the hardiness of these bees. Again, many of the Italians and a few of the Carniolan queens will die in the cages unless soon introduced to nuclei after they leave the cells. Not so with the Punic queens, they can successfully resist starvation, cold and ill treatment in most any form. Punic queens can stand confinement and privation longer than any other race of bees known to us.

All queen breeders are aware of one bad feature which is more characteristic of the Italians than any other race of bees. Many of the virgin queens are lost in the mating flight. There is no such trouble with the Punics. Not one virgin queen in fifty is lost. Bro. Pratt had some unfertile Punic queens confined in cages about twenty days. They were then introduced, promptly mated and commenced to lay at once. While the Italians and Carniolans are filling one comb with eggs, a Punic queen will fill three the same size. Every cell will have an egg in it. This is not equalled by any queens except the Cyprians, and this was the only good feature that race possessed.

Now let us tell you about the worker bees of the Punic race. They are black, yet handsome. When a hive cover is lifted and the frames exposed of a full colony of these bees, the first thought is that some one has turned black ink over the combs and frames, so black are the bees. So much as to the color of the Punics. All races of bees imported into this country have been tested in the Bay State apiary, but none have shown so much energy, push and business qualities and promise so well as the Punics. Although there are as good colonies of yellow Carniolans and Italians in our yard as can be found in any apiary, we feel bound to say that the Punic bees excel all others in working qualities, that we have tested. They are now, Sept. 20, working on golden-rod, and if our readers could see them go out of and return to the hive, they would not doubt this statement as to their working qualities.

Now let us tell you wherein the Punic worker bees differ from all other races. You all have stood beside a hive of bees and watched them go out and in when gathering honey smartly. The Italians and other races on returning from the field usually land at the end of the alighting board and walk to the entrance and enter at a moderate pace. The Punics do nothing of the kind. When they return from the field they light exactly at the entrance, just the same as they would be obliged to do were there no alighting-board to the hive. As soon as they reach the hive they are in as quick as a flash. One must look sharply in order to see whether they are carrying honey or pollen.

When the workers come out of the hive to go to the fields, they do not run the entire length of the front board and then jump off as all other races of bees do. The moment they put their heads out of the entrance they are on the wing, and off to the fields. The Punic bees do not want a front board to their hive to land on when they go out and in. This is very peculiar in them.

The Punics are so decidedly different in all their characteristics from all other races, a person unacquainted with bees

would have no trouble in detecting them even in a large apiary. When we say that in our opinion the Punic bees are superior to all other races, and will so prove, we are aware of what is in store for us, should they prove otherwise than as predicted. All the beepapers (both first and third class) but one will come down on us. And not only the papers, but almost anybody who can "sling ink" will heap abuse upon us, and all this because we have been a little more energetic and enterprising than they, and have done something they have not even attempted to do. Well, let them howl, the more they do so the more free advertising and the larger the sale of queens, as has been the case with the golden Carniolan this season. My opinion all the same is that the Punic bees have come into this country to stay. Stick a pin in here, my good friends.

MONEY IN BEES.

Do you think you would have been richer or poorer to-day if you had never had anything to do with bees?—*Question in Gleanings.*

Dr. Miller and Rambler replied as follows:

None of your business. Oh! you "didn't mean to be impertinent?" Well, if you mean the amount of money, I'd have been a good deal richer if I'd never seen a bee—that is if I'd been alive now. But I don't crave any sympathy. I'm no pauper. I have one of the happiest homes, one of the best wives, and I don't know any other business that would let me have so much time with either of them. I have clothes enough to keep me warm, and more food than I can eat. I've lots of fun with the bees, and am healthier and younger than I was twenty-five years ago. I'm expecting a good time while I live, and a better one afterward. What's money to a man who can't stay home to enjoy his best earthly treasures? How rich does a millionaire feel, with a bad liver and a sour stomach? Yes, I'm richer for the bees.—C. C. MILLER.

Well, that's an awful question. I certainly could not have been poorer. As to whether I should have been richer or not, the Lord only knows—I don't. —RAMBLER.

Very few who keep bees expect to get rich thereby. The fun, recreation and healthful exercise all get in caring for their apiaries, are recompense enough for all, if the honey is included and counted for what it is worth. Bee-keepers enjoy life as much as any class and we find them about as good a set of people to deal with as can be found on the face of the globe.

PUNIC QUEENS.

In order to close out what few Punic queens are remaining in nuclei, the following reduction in price will be made after Sept. 20.

After this date we will mail

One Punic queen for . .	$3.50
Two " " " . .	6.25
Three " " " . .	9.00

The APICULTURIST will be mailed from November 1, 1891 to January 1, 1893, to each one who orders one of these queens before October 1, 1891.

Directions for introducing mailed with each queen. We also guarantee safe introduction of all *Punic* queens.

We have a few Punic queens mated to yellow Carniolan drones. Will mail them for $1.50 each. These are fine queens. API one year and queen $2.00.

A FINE CARNIOLAN QUEEN.

H. ALLEY:—Enclosed find cash for an Italian queen. The Carniolan queen you sent me is the finest I ever had.

GEO. H. DEVELL, *Bangall, N. Y.*

LIKES THE APICULTURIST.

FRIEND ALLEY:—I like your bee journal as you give some valuable information in it, and I like the plain yellow cover because it helps me to find it so quickly when in a hurry.

L. C. AXTELL, *Roseville, Ill.*

AGAINST THE YELLOW CARNIOLAN.

Henry Alley, in the *American Beekeeper*, argues that black Carniolans will very speedily develop the yellow tendency in the race; and, by way of proof, he urges a trial of the experiment. He says that in-breeding of black Carniolans will develop, sooner or later, bees with yellow bands. While it is true, that two of the imported Carniolan queens we had showed a tendency toward yellow in their bees, yet it seems to us that, if Mr. Alley's theory were correct, there would be no such thing as black Carniolans at present, because the yellow tendency would, years and perhaps centuries ago, have obtained entire predominance and there would be no such thing as black Carniolans. As it is, most of the Carniolans we have ever seen or read about have been black. —*Gleanings*.

How would it be, friend Root, if the yellow Carniolans are continually exposed to a dark strain of bees? I acknowledge that I cannot rear yellow bees from Carniolans without a good deal of care. By selecting the yellowest queens and drones we can produce beautiful yellow Carniolan queens and bees. While I believe the dark tinge can be bred from the yellow Carniolans, I do not believe the yellow tinge can be bred out of the dark strain. Try it, Bro. Root, and see how you can make out. You all will soon be on my side of the dispute. Now I have all but one of the bee-papers against me on this question, and let me here say, that the paper (*American Beekeeper*) which favors our side of the question, is the only paper that has investigated the subject. All praise to the *Beekeeper*. The editor of that new publication is not one of those fellows to decide a question on mere hearsay evidence.

AN INQUIRY.

Can any of the readers of the API inform us the date of the meeting of the North American Beekeepers' Association? It is our intention to be present 'Tis now some over a dozen years since we attended a bee convention in Albany, N. Y.

JUST SPREADING HERSELF.

HENRY ALLEY:—The golden Carniolan queen I received of you a little more than two weeks ago is just spreading herself. I do not think I have ever noticed a case when a young queen has filled the combs so rapidly. I am much pleased with her.

F. O. BLAIR, *Trinidad, Colo.*

ANOTHER CASE OF YELLOW CARNIOLANS.

HENRY ALLEY:—I have come to the conclusion that to keep the dark Carniolans from producing yellow bees is something not easily done. I have fine yellow queens from thoroughbred dark Carniolan mothers. The first generation these dark queens produce bees with yellow bands. I dislike this condition. I wanted to keep dark Carniolans. But think I shall have to try your "yellow Carniolans" if they won't turn some other color in a few generations. How is it? I want to try the Punics sooner or later, if they prove superior to other races.

I believe I have discovered in this dry "country" the honey producing plant known to apiculture.

CHAS. L. STRICKLAND, *Peabody, Kan.*

A LARGE QUEEN.

Bro. E. L. Pratt has a six-pound queen. She arrived Sept. 20. Congratulations. This queen will probably do more "piping" the next few months than Bro. Pratt has been accustomed to hear, as 'tis the first-born in his home apiary.

SEPTEMBER WEATHER.

September has been the pleasantest month so far this year. Very few days that the bees could not go to the fields and gather honey. Every queen in our several apiaries has been fertilized. This is a far different report than any we could make for the past three years, in the months of September, as it was wet the entire months, and ruinous to the queen business.

Bro. A. .I Root has succeeded in safely mailing more queens to Australia. The last queen arrived there July 23, in fine condition.

One selected tested Punic queen and the American Apiculturist one year for the small sum of $5.

HOW TO INTRODUCE A QUEEN BEE.

Before the new queen is introduced the colony should have been queenless three days (72) hours. The next move is to destroy all queen-cells.

Insert the cage the queen is mailed in in one corner of one of the brood-frames. Then use the fumigator and smoke the bees a very little with tobacco. Do not blow too much smoke in at one time. Spend about fifteen minutes in the operation. During this time give the colony an occasional puff from the pipe. If the bees are so affected that they tumble down and roll out at the entrance, cease smoking them. The idea is to give just enough smoke to scent the bees and queen alike. Use the pipe sent with queen.

Do this work about sunset. The bees will release the queen by eating out the food.

PRATT'S PRICES OF PUNIC QUEENS.

For the benefit of those who cannot afford to pay what seem to be fancy prices, we have decided to offer virgins at $1 each, $5 per half dozen, and guarantee their safe introduction.

For those desiring queens from imported mothers, purely mated to imported drones, the price has been set at $3 each for the present. Orders are positively fill d in rotation.

We shall select some of the finest queens for breeding purposes and can doubtless spare a few at $5. Yearling breeding queens, the best we have at $25 each. Only a limited number.

We also have two little books: one on Queen-Rearing, the other on Honey Producing, at 5 cents each, by mail.

E. L. PRATT.

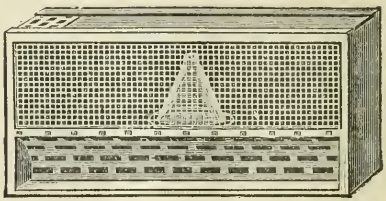
PRATT BEE FARM, *Beverly, Mass.*

Alley's Drone-and-Queen Trap.

SIXTY THOUSAND IN USE.

Prevents swarms from decamping and destroys all useless drones.

R. L. Taylor of Lapeer, Mich., President of the International American Beekeepers' Association has this to say of the trap:



"The drone-and-queen trap I find an indispensable convenience. I should feel like a duck on dry land without it. It saves me LABOR and prevents ANXIETY."

PRICES.

One trap, by mail,	$0.65
Six, in flat by Exp. (one made, seven in all)	2.00
Twelve " " " " " thirteen " "	3.50
APICULTURIST one year and sample trap,	1.10

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Wenham, Mass.

TESTIMONIALS.

The traps work finely.
CHAS. E. DOW, *Lawrence, Mass.*

You have perfected a valuable device.
DR. G. L. TINKER, *New Phila., O.*

I have received your trap. All one can ask for.
L. A. READING, *Lambertville, N. J.*

MR. ALLEY: I have just had the pleasure of testing one of your traps. It is certainly *the* thing.
J. W. CARTER, *Pleasant Dale, W. Va.*

1872 Keystone Apiary. 1891

ITALIAN QUEENS AND BEES.

Select, June,	$3.50,	July to Oct.,	$3.00
Tested, "	2 50,	" "	2 00
Fertile, "	1.50,	" "	1 00
6 Fertile, one order,	8.00,	" "	5.00

Send for circular. No Supplies.

W. J. ROW,
Greensburg, Pa.

A6m—Mention Api.

THE AMERICAN APICULTURIST.

A Journal Devoted to Practical Beekeeping.

VOL. IX. NOVEMBER, 1891. No. 11.

CONTRACTING THE BROOD-CHAMBER FOR WINTER.

MRS. A. L. HOLLENBECK.

HENRY ALLEY: The API for Oct. just received and as usual it is good and contains information on several subjects that was just what I wished to know; but about one subject on which I would like to have a little advice I can find nothing. My bees are all in ten frame L. hives. The old swarm have filled all ten frames full, but some of the new swarms have only eight frames full. Now, what I want to know is this: "Will they not be more likely to winter well if I remove the two outside frames from each hive and put in their place tight fitting division-boards, thus making them the same as eight-frame hives?" I have noticed that the bees seldom use any honey from the outside frames during the winter, and the question is, Would they not be better off with a smaller place to keep warm? I winter on summer stands.

Now for a bee story which I would like to have some one explain if possible.

About September 5th, a swarm of bees having a fine young Italian queen (hatched in the hive) and five frames of her own brood in all stages, left the hive, queen and all, except bees too young to fly, and went to a hive containing the strongest colony in the yard. The pile of dead bees in front of the hive of the strong colony attracted my attention, and a little ball of bees on the alighting board showed me where to look for the queen which was dead.

I lost a nucleus swarm in July in exactly the same way, but as they were in a small hive, supposed it was the heat made them swarm out. These last, however, were in a large hive, in the shade, had some honey in the combs and plenty of golden-rod in the fields. Now, what do you suppose possessed them to make them act in such a manner?

GOOD QUEENS.

If all of those 1200 queens you have sent out this year are as good as the Italians you sent me, there must have been a pile of honey gathered for somebody this year. Three frames of hatching brood, one of honey, and a little feed till they got started and the bees were old enough to work in the field, was all I did for them. The one received June 20 has her ten-frame hive packed full and enough surplus to pay for herself and her hive beside. The one received about July 25 has nine frames full. Now, do you honestly believe the Punics could do any better? If they can I shall have to try one next year sure.

Millard, Nebraska.

By all means remove the two outside combs. Not only would this be a great benefit to the colony in winter, but the real advantage by such a plan would be better appreciated in the spring. The bees will

not only winter better on eight combs, but in the spring will build up more rapidly, and go ahead of any colony wintered on ten frames. This has been my experience. When you have tried eight frames one year, you never will again use ten frames in one hive.

The bees swarmed out because of discouragement and for no other reason. Had you fed them a small amount of syrup occasionally, they would not have deserted their hive. They went to the strong colony because there were more bees in front of that particular hive.

I often have this same trouble in my own apiary, and the only way to prevent the small colonies deserting their hives is by feeding about half a pound of syrup each ten days.

Well, I don't know as all the queens I sent out are as good as those sent you, 'though I do my best to have them equally as good. Every queen dealer in the country would like just such reports as the above from the queens they have sent out. It should be borne in mind however, that *all* queens, though apparently good, do not turn out satisfactory. A good many queens are injured in the mail, and a good many are ruined when introduced; when injured by introducing, the dealer usually gets a blessing from some of his customers. Such persons are terribly disappointed and vexed at their loss, and, before recovering their senses, sit down and write an insulting letter and accuse the dealer of sending an inferior queen, and sometimes accuse him of sending a virgin queen. I know of but few swindlers now in the queen business. If you read this copy of the Api carefully you will have no trouble in locating one of them.

The North American Beekeepers' Association meets Dec. 8 to 11, at Albany, N. Y. We shall not be there. Would have attended had the convention been held this fall.

PUNIC BEES.—A HARD COUNTRY FOR BEES.—SEVERAL QUESTIONS, ETC.

F. O. Blair.

Friend Alley:—Reading the accounts of the Punic bees in the Api has given me a genuine touch, I think, of "swarming fever." The symptoms set in rather strong when I received the August Api and the information obtained since has greatly increased the febrile excitement.

I am generally a little slow about taking hold of any new untried thing which is too often highly regarded and enthusiastically recommended by its friends, sometimes letting the imagination run away with the facts. But in the case of the Punic bees I am disposed to accept your recommendation of their good qualities and characteristics, and commence raising them at once. I began to purchase queens of you in the "sixties" and have always found your statements accurate and your judgment reliable with reference to the honey bee and bee culture; therefore I unhesitatingly accept your opinion of the value of the African bee as undoubtedly correct.

I believe the Punic bee will prove to be especially adapted to this region of country. This place is situated among the foot hills of the Rockies, between six and seven thousand feet above the sea level, and within sight of the snow-capped peaks of the higher range which donned its winter mantle of white in September. The summers are short, and the honey-gathering season is brief, and a hardy active energetic bee is just what we want in this climate. The high altitude gives a rare atmosphere and the little loaded workers come home laboriously to deposit their stores. A little addition to the energy and activity of each worker will increase immensely the efficiency, and consequently the value of the colony. I judge the Punic bee to be especially adapted to the circumstances and con-

ditions of this locality, and to be just what we want and need.

Everything here is in striking contrast with New England. The rain fall is very light, only about one-fourth as much as in Massachusetts, and ordinary crops can, for the most part, only be raised along the streams by irrigation. Vegetation is scanty, and the honey-producing plants are some hardy species fitted to grow in a sterile soil with little moisture.

INTRODUCING QUEENS.

E. L. Pratt and you lay great stress on closing the entrance of a hive, when introducing a queen, with a plantain leaf. If that is indispensable one must be badly off here, for I have not seen a plantain leaf in all this region, and do not know that there is one in Colorado.

Please give me a little information. I procured a virgin Punic queen of E. L. Pratt, a genuine "Black Beauty." She was fertilized by an Italian drone, and is peopling her colony with a mixture of steel-gray and yellow hybrids. I desire to know if the drones reared from her next season will be pure Punic drones? Will her progeny, as was the case in the old days of slavery, follow the conditions of the mother? I know what the theory on the subject is, but what is the fact? What has your experience taught you? If I obtain more virgin Punic queens and have them fertilized by drones reared from the queen I now have shall I assuredly have pure-bred Punic bees? I wait your answer with interest and anxiety.

Trinidad, Colo.

The above is respectfully referred to C. J. Robinson, also to the editor of the *Missouri Beekeeper*, and all others who have been calling me a swindler, etc.

Closing the entrance with a plantain leaf has reference only to the little queen fertilizing hives I use. A large hive can be closed by throwing grass against the entrance. This is practised in the Bay State Apiary often during the summer. Sometimes after smoking a colony other bees will try to rob it; and to prevent it grass is thrown against the entrance to keep the robbers from entering. While the bees that belong to the hive will work their way out and in through the grass, the robber bees dare not attempt to pass it.

It seems to me that no bees can do much in the country in which you live, unless it be the Punics.

I am of the opinion that the Punic race will live and thrive in a desert where there is little or no vegetation.

Yes, the drones from the Punic queen you have will produce pure drone progeny. My first golden Carniolan drones came from a yellow Carniolan queen that was fertilized by an Italian drone. These few words may clear a little mystery concerning the origin of the now famous golden Carniolan bees.

NOTES AND COMMENTS.

PUNIC BEES.

I read with some astonishment your note about Punic bees in this week's *Journal*. You profess not to know anything about them, yet that same ignorance does not prevent you giving them a bad character.

However, my main object in sending you this note is to supply you with my experience of Punic bees. I shall leave the importer to settle definitely their precise location in Africa.

During the last three years I have submitted the Punic bees to careful tests, and I find that they build up rapidly, winter well in our severe northern climate, and come out strong in spring. They are smaller and darker than our native bees, but are more active, working earlier and later.

W. STOKES.

The above extract was taken from the *British Bee Journal* of Sept. 10. 'Tis a hard hit at the editors of that paper. There are just such knowing people here in America. I say America as that includes both United States and Canada. Below will be found sti

more evidence of the inconsistent way in which the editor of the *B. B. J.* treats the discussion of the Punic bees.

PUNIC BEES AND THOSE WHO KNOW NOTHING ABOUT THEM.

In the "*B. B. J.*" for August 27th some one signing himself "Inquirer" wants to know who I am, my real name, etc., and he also feigns ignorance to "A. L. B. K." Messrs. Stokes and Robinson who are mentioned in the *Journal* on August 20, and "if they are known in the bee world as bee men of experience," and runs to Messrs. Cowan and Carr to advise him to have nothing to do with Punics. These kind persons, Cowan & Co., preface their advice by saying, "As a rule we do not like to import into our columns controversies originating in other journals," a very good rule too, but they have not adhered to it. They do not say that the Punic stock in Mr. W. B. Carr's apiary in the spring of 1890 was the "best and strongest" he had (see *Record* for June, 1890). They do not say that Punic bees were mentioned in their journal on June 5, 1890, and where they came from; nor do they say that when Mr. J. W. Woodley wrote on October 30, 1890, condemning them before he had ever seen a bee, I wrote offering to supply him with two queens to be tested against any two he chose, and if they failed I would make up the difference. Oh! for consistency. They would on no account break their rule, made for the occasion, to do me a favor, but they break it on the first opportunity to do me something else.

I never had a very high opinion of their accuracy, and certainly it is not improved after reading the following: —"The only other person besides 'A Hallamshire Beekeeper' (otherwise John Hewitt), who has written in favor of Punic bees is E. L. Pratt." Mr. Henry Alley says, in the *Apiculturist* for August, "Our opinion is most favorable of them. If the Punic bees are one-half as good as is claimed every beekeeper will want them, and all other races will be superseded, and now that we have seen these bees and have become convinced of their superiority we shall commence to rear them." If this is not "in favor of Punic bees" I should like to know what is. I have never seen nor exchanged a line with Mr. Alley. Another person I will name who has written in favor of Punic bees is Mr. W. B. Carr, one of the editors of the *B. B. J.*, but this was before he found out how difficult it was to import them; yet these learned editors now say, "We know nothing about the so-called Punic bees, and can give no information as to their value."

"Inquirer" thinks he makes a great point of the bees being here seven years. Is it seven years since 1886? I trust you will find space for this in the *Journal*, if the editors of the *B. B. J.* can make it convenient to break their rule again and import it into their columns. It is no use my sending it to them, as it would be destroyed judging from past experience. "Inquirer" should remember that it is in very bad form to ask for a writer's name without giving his own, and I think no editors, save those who conduct the *B. B J.*, would either have printed the anonymous request or supplied the information. Anyone sending his name and address to John Hewitt & Co., Sheffield, can learn all about—A Hallamshire Beekeeper.

Oh! no, the funny editors of the *B. B. J.* dare not let any person say one word in favor of the Punic bees in their columns. They have the space however, for an irresponsible party to attack and vilify a friend whom they have known for years. In a recent issue of that paper appeared a short article from a man (I say man, 'though he is no part of a man or of a gentleman), who styles himself, A. Lowmaster. This man, we regret to say, makes his home in this country. How-

ever, (Low) master is about right for the name of any one who can make such base, mean, lying statements as appeared in a late issue of the *B. B. J.* He said Alley is the man who is selling Carniolan bees crossed with Italians for golden Carniolans.

The editors of the *B. B. J.* have had sufficient acquaintance with me to know that the statements of this Lowmaster are devoid of all semblance of truth or fact. No editor has a right to publish such (intended to be) damaging statement from a stranger. No respectable paper will do it.

This honest man (?) Lowmaster, is the queen dealer who sent me two common black queens for imported Carniolan mothers. About half the worker progeny of these queens showed yellow bands, and both queens were inferior in all respects. Who cares to deal with such a man? We will furnish his full address to any interested parties. He does not live far from Belle Vernon, Ohio. If any reader of the API has an idea that this charge is made for this occasion, I call upon Lowmaster to publish my letters to him in reference to the matter.

While I am on the Punic bee question, I may as well get it all in under one head. Here is another item:

> I wrote to my brother, who lives near Sheffield, Eng., to make inquiries about them, and he writes me some very strange things in reference to the Punic bees. He assures me that the whole thing is a farce, that they are nothing but small black bees, have no wonderful traits, and that the best beekeepers of England wonder why Americans are so gullible.—W. JOHNSON in the *Canadian Bee Journal.*

Well, they really do have Punic bees in England after all. Where is Bro. Cowan? Wonder why he never discovered the fact. Our friend Johnson must have had on his mind those Cyprian and Holy Land bees Jones imported, when he wondered why Americans are so gullible.

No such man is known in England as W. Johnson.—ED.].

"Punic bees are getting some hard blows from good apiarists," says Thos. G. Newman.

This I deny, though it comes from T. G. N. Name one good apiarist who has had any experience with Punic bees that has said one word against them; *name him*, Thomas, or—or, well, go into your hole again.

To conclude, will say that the Punic bees still maintain their good reputation and I am more pleased with them than ever.

I want it understood, however, that should these bees not do as well as they now promise I shall say so, and in such terms as no one can mistake. I shall not wait for our customers to condemn them. So, friends, do not be afraid to invest your money in Punic bees.

After testing the Cyprians and Holy Land races and found them wanting I condemned them. Bro. Jones, I believe, has not done so up to this date.

If the Punic bees had no other good points but hardiness and mild disposition, I should propagate them for cell-building if for no other purpose.

Pure Italians are the poorest race for rearing queens or cell building of any we have. Any other race is better, and the Punics are best of all. It will pay queen dealers to introduce the latter race for this one purpose.

I have been expecting some one to say "wonder if Alley will not rear golden Punic queens?" I am not sure I shall not as I have already found that not *all* the Punic queens I have reared produce "typical" Punic bees. Many of the young queens produce more or less yellow-banded bees. think I can hear Dr. Miller say, "there it is, Alley is mixing the yellow and black bees again."

Don't be too fast, friends, in forming an opinion on this point. Tell what you think about it when I have explained how it is that there are yellow-banded bees in the Punics. It seems there are about as many different races of bees in Africa as there are languages spoken in that far-off

country. Some of these races of bees are yellow in color. Now out of about forty queens imported direct from Africa but two or three of them were suitable to rear queens from. Would advise no one to claim that these queens were mismated in our apiary, as the nucleus colonies used for fertilizing the queens were more than two miles from all other bees, and drone-traps were placed on and had been on for months all the hives in the vicinity; and what is more, there were no drones in any of the colonies even where the traps were used. Then again, the Punic drones were as black as black could be, and the mothers from which both drone and queens were reared produced only the blackest bees, or what any one acquainted with the Punics would call pure. Well, friends, do you see any reason why I cannot rear golden Punic bees? Why cannot any one select the yellowest Punic queens and drones and produce golden Punic bees?

Now this was precisely the state of things I found with the dark Carniolans. The queen and colony of dark Carniolans, Andrews and Lockhart sold me were as dark and pure as any Carniolans I ever saw, not a striped worker bee nor a drone that had the least tinge of yellow about them. Yet the queens and worker bees of the daughters from the young queens did show more or less (not bands) yellow. Now does any reader of the API see any reason why I should be accused of mixing Italians and Carniolans and selling them for golden Carniolans? If there is any Italian blood or other mixture in the golden Carniolans it got in before the queens came to me, and the man who sold them is following me from one bee paper to another claiming that the Carniolan colony he sent me was pure. His claim of purity makes it all the more "wonderful" that I was able to produce yellow bees from pure black ones. Don't you think so, reader?

It has been very difficult to keep all of the foreign races of bees as pure and as typical as when first received except the Italians; with them there was no such thing as purity. All the Italian queens ever imported, and 'tis so up to this day, showed more or less bees marked with from one to three bands.

The only way to get queens to produce uniformly marked bees, whether they be Italian, Carniolan or Punic, is to breed by selection. To breed Italians for yellow, select the lightest queens and drones; to get the gray Carniolan, or steel-colored worker Carniolan bees, select the darkest queens and drones; to get all black worker Punic bees we also must select the darkest queen and drones.

American queen dealers have had but little trouble to produce beautiful golden Italian bees, and before another season ends, I have no doubt about getting Punic queens to produce all black worker bees.

Now, friends, you who have received queens that show a few yellow-banded bees can rear by selection just as good and pure queens as I can. Let us see who will get them first and also produce the best queens and bees.

A GOOD REPORT FOR THE PUNIC BEES.

I observe you think the statement of the superiority of the Punic bees is colored. I have not seen that statement, but I assure you that, if they are as good as some I have had for two years, it will not be easy to exaggerate their good qualities. With me they are the best of all imported varieties of bees.

I also observe that some speak of extra colored Ligurian (Italian) bees. Similar beauties I had were neither more nor less than Ligurians crossed with Syrians, Cyprians, or Holy-Land bees.

WM. THOMPSON.

Auchinraith, High Blantyre, Scotland.

The above is exactly my experience with the Punic bees. It seems that all those who have tested them are of the same opinion. Those who never saw them say they are worthless and a humbug.

The Punics are the best race of bees ever imported to America

At any rate, they have thus proved themselves on a short acquaintance in my apiary.

Punic bees, while so highly praised by those who sell them, have strong insinuations thrown out against them by British beekeepers, as being in the line of humbugs. As yet, I can only say that, in appearance, they are decidedly different from all other bees I have seen.—*Stray Straws.*

That's it Dr.; they are different from all other bees and in all respects. They grow better, as you will find as your experience grows with them. I know that they are as good honey-gatherers as any race, as they have filled their own brood-chamber with winter stores, and stored enough in a top story to winter another colony and all this since Sept. came in.

LETTERS FROM OUR CUSTOMERS.

TWO FINE QUEENS.

FRIEND ALLEY: Queens came to hand in fine condition and I am well pleased with them. They are the finest bees I ever saw.

I don't see why some of the queen dealers "howl" about you. Their queens can't compare with yours, and that is what's the matter.—JOSIAH HEILMAN.

Manorville, Pa.

A GOOD STRAIN OF BEES.

FRIEND ALLEY: The excellence that your queens really possess inclines me to the belief that what you say in regard to the good qualities of any strain of bees is correct; at least I am not afraid to accept your judgment in all cases so far as you have any experience.—SAMUEL THRALLS.

Blackville, W. Va.

YELLOW CARNIOLANS.

MR. ALLEY: Carniolan queen received and introduced successfully. I expected to find her bees a cross between dark Carniolan and golden Italians. I am now satisfied that there is no Italian blood in them.

That paper E. L. Pratt read before the New England beekeepers' meeting is worth the price of the API one year. —JUDSON DEWITT.

Forestville, Ont.

A GOOD WORD FROM CALIFORNIA.

MR. HENRY ALLEY: I saw your description of the Punic bees in a bee paper. I now write you for further information as I know your opinion is just as you state it.

I have received the best queens from you that I ever had and I have had them from a number of prominent queen dealers.—A. T. CHRISMAN.

Coalinga, Cal.

BUILDING A HONEY-HOUSE.

MR. ALLEY: 1. I want to build a honey house. Can you give me some idea how it should be built?

2. Will it do to rear queens this fall and keep them till spring to mate with the early drones?—DUNCAN & CONRAD.

Dupont, Ga.

As to question 1. Some of our readers can reply to that much better than I can, though I have a honey house or room, in which I keep combs containing honey, and in which nearly all the work we do to bees is performed, yet our house was not devised for the special purpose of storing honey. A house for such a use should be made bee proof, as well as to exclude mice and vermin of any kind. The room should be well ventilated, as dampness is bad for honey. However, this question is left to anyone who desires to reply.

2. No, it will not do to keep virgin queens through the winter in order to mate in the spring. When queens are twenty days old they should be fertilized.

This fall I had about a dozen virgin queens that were thirty days old. These queens were crowded out of nuclei and so were kept in cages for thirty days. Having room at that time, and desiring to test the matter

as to how old a queen would mate, these queens were introduced to nucleus colonies; nearly all of them were fertilized within a day or so after being introduced. One of them hatched Aug. 18, and was fertilized Sept. 18. This particular queen was mailed to Professor Cook. Though she was received in good condition, she was lost in introducing. I regretted this very much, as I desired to know how she would turn out. You all know what Professor Cook says in his work concerning the age at which queens can become fertile. I had one queen fertilized when forty-two days old, yet could never make anyone believe this, and now notwithstanding the above facts am almost persuaded to think there was a mistake in the number of days.

I am not, however, mistaken about the age of the queen sent Professor Cook.

UNITING NUCLEUS COLONIES.

I have two nucleus colonies I wish to unite. How can it be done?

Big Creek, Ga. WM. W. GLOVER.

Take the queens away and at the end of three days smoke both colonies with tobacco and place all the combs and bees in one hive. Give them a little more tobacco smoke and let one of the queens run in, and the work is done. It can all be done in less time than it has taken me to tell you how to do it.

MORE THAN ONE QUEEN IN A COLONY.

MR. HENRY ALLEY, Wenham, Mass. DEAR SIR: I am with Mr. Charles Adams and I am a bee man of fifteen years' experience and have always been trying to accomplish one thing, and that is to have more than one queen in the same brood chamber without anything to keep them apart, and I have been successful at last. I have as many as four in the same chamber, all loose and have seen them meet on the combs and caress one another; they are not related. I would like for you to publish this in the API. I would like to hear from the bee men in regard to using more than one queen in the same colony. Yours, G. W. PALMER.

The above came to hand sometime ago, but after being put in type was misplaced. I know of but one way that more than one queen can be kept in a colony of bees at same time. That is by depriving the queens of their stings. By just clipping the point of the sting more than one queen may possibly find room in the same hive of bees; just what is gained by such an operation remains to be seen. Our friend does not state.

If I am successful in removing the point of the stings, will try half a dozen queens in one colony this fall and then test the matter. If a success, what a scramble these queens will make in the spring for the empty cells in which to deposit eggs.

The experiment is worth trying, as no great harm can be done in any event.

ONG ENDORSEMENT OF THE EDITOR

HENRY ALLEY: October number of the API to hand, and better than ever. Among the many good things I notice you offer Punic queens crossed with Carniolan drones for $1.50.

Now if you have any left by the time this reaches you, please send me one immediately and I will remit on receipt of same.

I have a Punic and several Italian queens from you. Send a "buster" so I can show the bee men here how "Alley gets there with both feet."

A friend of mine here is "tickleder" than ever over the golden Carniolan queen he got from you a few weeks ago.

We people here are willing to risk Alley's queens any time and when Alley says so it's law, especially if it happens to be contrary to the company you mention in API.

Let them howl. You send us good queens, and my word for it, we will stay with you till all——freezes over. *Independence, Ky.* S. H. HOLMAN.

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EDITORIAL NOTES.

BRACE COMBS.

A friend in writing for our price-list desires to know what is considered the best frame to use to prevent the bees building brace combs.

Any frame that has a wide and thick top bar. The bar should be $1\frac{1}{8}$ inch wide, and not less than $\frac{5}{8}$ inch thick, and just a bee space left between the top bars. This is the only way we know of to prevent bees building brace combs.

EVERYBODY KEEP BEES.

We are among those who think most anybody can and should keep a few hives of bees. Hundreds of men with families might keep bees and produce all the honey needed on their tables. The expense would be hardly worth mentioning after first cost.

Bees can be kept in a back yard, on the house top, in the attic or in any out building, or in any place where they will not sting people who are passing by, neighbors or children.

Bees have wings, and all that is needed to accommodate them is a free flight to the fields.

HOW TO KNOW WHETHER A QUEEN IS LOST IN INTRODUCING WITHOUT OPENING THE HIVE.

We find a good many beekeepers who introduce queens open the hive, and often several times each day to see how the new queen is received or how she is getting along.

All agree that this is a bad thing to do, as it is well known that a good many queens have been destroyed by such an operation. It takes at least a week's time for the bees to get acquainted with their new ruler and to get settled down to business after change of queens.

Now in order to know whether the new queen is received, all that need be done is to place a drone-and-queen trap at the entrance of the hive. If the queen is destroyed she will be found in the trap, and if the new queen attempts to decamp after being introduced, the trap will hold her.

We have no doubt seventy-five per cent of the queens lost in introducing are destroyed by opening the hive too soon after the queen is liberated.

Use the trap and thus save all anxiety and loss of queens.

ADVERTISING YOUR BUSINESS.

If anyone has any thing to sell he must advertise. What other way are the people to be reached except by and through the medium of a publication?

Booming one's goods is only a method of advertising. Much complaint from a certain direction has been made concerning our method of advertising in the API. We are in the bee business and our whole time and attention are given to it. We are obliged to advertise in our own paper. Do you know of any editor and proprietor of a bee paper who is not guilty of the same offence? We never have made any money out of the bee business, that is, have not got rich and never expect to. Must now follow the bee business as long as we can draw our breath. Have been too long in it to make a change. We intend to use the columns of the API to advertise our goods, notwithstanding W. Z. Hutchinson and the Editor of the *British Bee Journal* object to it. Don't know why they object; we have not called upon either of those worthies to pay any bills, or to con-

tribute one cent towards our expenses.

Now, friends, if you have any goods to sell, advertise, and advertise in the API. It will pay you to do so. Thousands of copies of our paper reach beekeepers who read no other bee publication. Don't be afraid to boom your goods.

HAS BEE CULTURE ADVANCED?

This question has but one answer. Bee culture has made rapid advancement every year the last quarter century. Compare our hives, sections, smokers, and in fact all the implements of the present day used in the apiary, with those in use no longer than twenty years ago. Note the improved machinery now in use for the manufacture of hives and sections, especially that of one-piece sections. In the matter of honey extractors see the great improvement. Just look at one of A. I. Root's extractors; compare it with the old wooden barrel and wooden reel of the first extractor sent us.

Consider the improved methods of handling bees, increasing colonies, and producing comb and extracted honey. The improved races of bees are not the least to be spoken of here. Haven't we advanced?

There is but one thing that bee keepers have not improved upon, that is the weather. This is beyond our control. See how we have improved every thing connected with beekeeping. Now, it has been demonstrated that some one can produce rain at will. Let us hope some method will be devised for driving away clouds and rain, and producing just the weather the beekeeper needs for the secretion of honey in the flowers. Beekeepers then will be all right.

Don't fail to read our new club and premium list found on another page this issue.

PACKING BEES IN WINTER.

Don't pack, is our advice, except over the combs. Leave a free circulation of air all around the brood-chamber. Use outside cases on all your hives in winter. Bees winter much better on summer stands in double hives than when placed in cellars.

PLEASANT READING.

So much has been said against the golden Carniolan bees that it is a great pleasure to read what some of our customers say concerning them. All readers of *Gleanings* are acquainted with Mrs. L. C. Axtell, as her name often appears in that paper. Then again, all whose disposition would allow it have given the golden Carniolan bees a hard hit, and so I'd like to show both sides of the question.

Mrs. Axtell bought and paid for all the golden Carniolan queens we sent her, so what she says of them must not be considered a paid-for puff. Here it is:

"The two Carniolan queens received and introduced all right on brood and nearly built up into good colonies. When I opened the hives I found a large quantity of eggs laid and both queens standing quietly on the combs, not looking the least frightened. Oh! you may be sure I was just delighted, such great nice looking queens.

They look very different from Italian queens, although they are solid yellow, or golden. I doubt if there is another colony among all our 240 colonies of bees that has so many eggs in the hive now, as has one of those Carniolans.

MRS. L. C. AXTELL.

Oct. 1, 1891.

Mrs. A. does not see much Italian blood in the Carniolans. Some other people who never saw a yellow Carniolan queen or bee can see nothing but Italian in them. Bah! stop your foolish and almost insane harangue about golden Carniolans being a mixture of the Italian and dark Carniolan races. Leave out the spite and try to recover your senses.

Miss Jennie Atchley says, in *Missouri Beekeeper*, "When a person thinks he or she can tell what a queen is altogether by her looks, I am here to tell you that such a person is simply off his base." Your head's level, Jennie, no matter how you put up your back hair.—*Stray Straws.*

The above item is just what we need at this time. The API has a few readers who think they can tell by the looks of a queen whether she is fertilized or not. Below is a sample of such letters as come here occasionally.

The fellows who write them do not stop to consider what they are trying to do. People who have an idea that an editor stands ready to publish his minor complaints, or one who is ready to "blow up" a person without properly investigating the matter are queer, to say the least. Editors are responsible for what they insert in their papers. Here is a specimen letter:

FRANKFORD, IND., Oct. 3, 1891.

MR. HENRY ALLEY:—The last queen I got of you was a nice looking queen; but she was not mated nor never had been. She has never laid an egg. I have four bee men that know she is not mated nor never has been. She can not fly. I have handled bees for sixteen years; that is long enough for any man to know whether a queen is mated or not. This is the first time this kind of a trick has been played on me. Now I want to know if you will replace the queen. If you don't your name s Dennis; by that I mean I will publish you in all the journals. We like your queens and if you will do what is right, you will have a pretty good trade. Write as soon as you get this and oblige me,

JESSE ALTUM.

What innocence! Do you really own *all* the bee journals, and can you command them at pleasure? Just think of it, here is Bro. A. and four other smart bee men who can swear as to whether or not a queen is fertilized.

Well, now, we have been in the bee business, the queen-rearing part, you know, for thirty years, and we cannot tell certainly by looks of a queen whether she has been fertilized or not. Now queens shipped by mail are very small after being knocked about in the pouches several days, and no man can decide correctly under the circumstances whether a queen is mated or not by her appearance.

The queen in question was fertilized, that is the funny part of it, and had laid her combs full of eggs before she was mailed. No queen goes out of the B. S. Apiary till she has laid more than 1000 eggs. There is no way so practical to keep the nucleus supplied with eggs and bees, as it is to let the young queen fill the combs before they are removed. "The queen did not lay," says Bro. A. Nothing strange about that. The wonder is that any queen lays after being thrown out a mail car going forty miles an hour as they often are. In such cases as is above cited when the queen fails to lay, she is most generally stung when introduced. Such queens are tolerated on the combs several weeks and then disappear.

The idea that this man should threaten to publish in case we did not replace the queen at once is rather fresh. Wonder if it would not be a good idea for people to wait till a fellow has refused to make good his guarantee before the threat to publish is made. Bro. A. is all right, though a little hasty in making the threat.

Here let me say that any customer can get satisfaction without threatening to publish me in the bee papers. After you have made the threat you cannot get your demands met till the threat is withdrawn.

We do not want the trade of any man who thinks we will send him virgin for fertilized queens.

The best evidence that the queen sent to friend A. was not a virgin is the fact that he had introduced her successfully. We claim that no one can introduce a virgin queen by any ordinary method of introduction to a full colony of bees. It cannot be done by inexperienced beekeepers at any time.

Friend Flanagan in a private note says: "I did not think you would put me so prominently before the people in favor of the golden Carniolans as you did; but I stand to all I said and will say again the queen you sent me is the finest and the queens reared from her are the best I have ever reared or saw."

Well, if that is not backing up a statement then I am no judge. I am ready to pay friend F. $10 for that queen. There are a good many more such queens as this one we sent out, and I am ready to pay a round price for some of them. I consider $10 a small sum for such queens as friend F. describes. How is it that such beautiful queens can be reared and the worker progeny is so fine and beautifully marked if the Carniolan bees are only a cross between the dark Carniolan and Italians? The dark mixture in the Carniolans has been bred out. Again I claim that the Carniolans are the original yellow race of bees; the more experience I have with these bees, the stronger I am convinced of this theory or fact.

Honey is selling at a low figure in Boston. We lately purchased three cases white clover honey at sixteen cents per pound. It was from the apiary of W. H. Proctor, Fairhaven, Vt.

Never in our experience was there better weather during the entire month of September than we New Englanders have been blessed with. This is the first year for at least five years that our colonies did not have to be fed about all their winter stores.

We have for a long time claimed that bees gathered considerable honey from golden rod. Now, after investigating the matter, we are convinced that very little honey comes from that source. Fall honey is mostly gathered from plants that spring up in the fields and by the roadsides, and in all places where the land is not too dry.

SPECIAL NOTICE.

We wish to say to those of our subscribers who have not renewed their subscription that we are ready to discontinue the Api to their address when notified that it is no longer needed.

The meanest men in the world are those who will not take a paper from the office and compel the postmaster to notify the publisher that it is not called for. We have found four such men since Jan. 1, 1891. Just one cent invested in a postal card would have saved their reputation at least as far as we are concerned.

OUR NEW CLUB AND PREMIUM LIST.

We club the American Apiculturist with any of the papers below named. The regular price of both is given in the first column.

The American Apiculturist,	$0.75	
With Gleanings in Bee Culture,	1.75	1.50
" American Bee Keeper,	1.25	1.00
" The Apiculturist and one sample drone-and-queen trap, by mail,	1.40	1.00
With sample swarmer,	1.75	1.25
" Thirty Years Among The Bees and Beekeepers' Directory,	1.75	1.00
Api and Italian Queen,	2.25	1.50
" Golden Carniolan,	2.75	2.00
" Punic Queen,	3.75	3.50

New subscriptions to Apiculturist will begin with Nov., 1891, No., and will expire Jan. 1, 1893.

Money for queens need not be sent till the queens are wanted.

Sample copies of Api mailed on application.

Remit by check, or money orders on Salem, Mass., P. O.

Our new illustrated Price-list and Circular now ready to mail. Sample copies of Api mailed free.

Address Henry Alley, Wenham, Mass.

RAISE YOUR OWN GRAPES.

The "Alexander winter grape" was so strongly recommended that we ordered several vines. They were set in the ground and have made splendid growth. It is claimed this grape can be kept all winter like the russet apple and may be eaten in April, tasting even better then. It was originated and sold by S. R. Alexander. His prices are $1.00 a vine, or three vines for $2.50. See his ad., this issue.

The *Apiculturist* is catching it from the *B. B. J.*, which thinks Hutchinson didn't come down hard enough on the *Api* for being a "big booming circular."—*Stray Straws.*

Well, I dunno, guess I will say this: If the Aug. Api with all its defects does not contain as much practical information on bee culture as a whole year's issue of the *British Bee Journal*, we promise, when any competent person will so decide, never to issue another copy of the Api. I get the *B. B. J.* weekly and have failed to find one original or practical idea in it for many months. None of our readers have complained of the Api. Will outsiders please attend to their own business and let mine alone.

THE SWARM-HIVER.

Some one has given the swarmer a terrible setting-up in *Gleanings*. I wonder why Bro. Root didn't refer the writer of the complaint to two articles that have appeared in his paper, showing how the swarmer can be made a success. Not only have I done so, but another person who has tested the swarmer has given a method (similar to my own) by slightly changing one of the boxes so that it now will hive any swarm that issues.

The fact is, I cannot give such directions for using and applying the swarmer as will make it a success in all cases. I send you the swarmer as we make them, and you must apply it to the hive. In many cases a little alteration in the construction of the swarmer will make it work successfully. For the benefit of those who have the swarmers I give below one of the articles referred to in *Gleanings*.

THE SELF-HIVER; HOW IT DID AND DIDN'T WORK.

In an issue of *Gleanings* some time ago you called for reports of the self-hiver, so I will give you my experience with it. I placed a hiver at the entrance of a hive June 25, and on the 26th a swarm issued, but it didn't work, and I had considerable trouble in getting the queen into the new hive. I then modified the hiver thus: I tore the perforated zinc from the box B, and put in its stead the zinc from box C, and then tore the wire cloth from the second division of box B and beveled the lower edge a little. I place the new hive close to the old one, and raise it two inches above it on four half-bricks; then put the "hiver" in place, not using box C at all, and 99 out of 100 swarms will hive themselves without any care except placing hives in place. Such is my experience. *Hinchman, Mich., Aug.* 10. E. A. Boal.

You see it costs little or nothing to make the above changes. I will say that three boxes are used in order to meet all cases, yet box B may be made longer, and box C dispensed with. I send you the correct and about the only principle that must be applied in order to make bees hive themselves. The application of it to the hive is left to the beekeeper.

In future all the swarmers sold will be constructed very much like the one described by Mr. Boal.

Bro. Root says the swarmer has been boomed too much. No, it has not. I have plenty of evidence that the swarmer, when properly applied, will do all that is claimed.

Speaking of booming things, Bro. Root, how is it with you? Who has ever done more booming for his goods than A. I. Root? Are all the goods you boom as good as you claim? Didn't you commence to boom the dove-tailed hive before you sold or used one? What has been boomed more than the Clark smoker? Do you still consider it a good smoker? Here is my experience with it. I ordered half a dozen of them, sold three of them to customers. I tried to use two of the others, but could not get the needed amount of smoke. I saw what the trouble was but did not care to alter more than one of them, and this one worked all O K. The trouble with the Clark smoker is at the base of the barrel. The draft over and through the fire cannot be concentrated, thus reducing the power to make smoke. I made a new barrel, same shape as used on the Bingham & Hetherington smoker, and got all the smoke needed.

I will say here that the article in *Gleanings* blowing the swarmer was inspired by spite. Let us all boom our goods, and if any are found worthless, cast them off. When so many good reports have come to hand concerning the successful workings of the swarmer, I am of the opinion it has not been boomed too much.

IT IS SAID

That Dr. C. C. Miller says some cute things and makes some hard hits in *Stray Straws*.

That Dr. G. L. Tinker has been very silent and quiet for several months. Did James Heddon put the quietus on the Dr. in that bee-hive controversy? Guess not.

That large crops of honey were secured in the season of 1891 in some parts of the country while in many localities little or none was produced. This is true of any season. 'Tis a big country, you know.

That Punic bees stand at the head of all the imported races, and that many of our readers expected this statement to be made: that the readers of the ART expect the editor to tell the exact truth concerning all things connected with bee culture whether it strikes a friend or an enemy.

That some people would write less for publication in bee-papers if they had better sense, and confine their remarks solely to bee matters. That it is bad taste and a breach of common decency for an editor to admit to his columns articles from unknown and irresponsible parties simply to vent their spleen and spite. That it cannot be done in the ART is a well known fact.

That there were more than four hundred golden Carniolan queens reared in and shipped from the Bay State Apiary after May 20, 1891, and only three of the entire lot that did not give entire satisfaction. I believe this is as good a showing as any queen dealer can make.

That orders for golden Carniolan queens did not come in on the rush till our friends, the enemy, yelled at the top of their voices and with all the venom and spite they could command, "swindle, humbug and fraud!"

That these parties have our thanks and are kindly requested to continue such tactics another year and that it will be much more to our advantage if they will commence the racket as early as April 1, 1892.

That orders are now coming in and being booked for Punic and golden Carniolan queens to be shipped in the season of 1892.

That orders for upwards of twelve hundred of these queens will be received before the end of the season of 1892.

That this statement is based on the fact that our orders for queens have averaged more than twelve hundred each year the past thirty years.

That this is a fact our books will show and they may be inspected by anyone who doubts the statement.

That a certain editor of a bee journal will let most anyone have all the space desired to slander, berate, vilify and abuse some of his best friends, and that T. G. N. and Son will give the slandered party all the space called for to refute the lying charges.

That some of those people who are slandered in bee-papers have other business than that of replying to such contemptible cranks whose only gift lies in the fact that they can sling ink.

That it will not be necessary for me to pay Thomas G. Newman & Son seventy-five dollars for advertising my goods in the A. B. J. (a thing I did in 1891), if they will let the cranks cry fraud and humbug in 1892 in their paper to the extent they were allowed in the season 1891.

That it is *seemingly* pretty rough to pay so much to advertise one's goods and then to have the editor pay a crank five dollars for an article inserted in the same paper claiming that the goods so advertised are a humbug and a fraud—*seemingly* I say it is rough.

That this statement can be verified (save perhaps so far as paying for the article) by reading the back numbers of the *American Bee Journal*.

That twenty pounds of stores are not sufficient to carry a strong colony of bees from October 1 to May 20, and that twenty-five pounds will do it.

That those beekeepers who pay fifty cents per pound for comb foundation and use full sheets in section boxes, and then sell the honey at twelve cents per pound, do not make money very fast.

That 8-frame L. hives are the coming hives.

That hundreds of beekeepers are adopting such hives as the standard. That such hives, when made of thin boards ($\frac{3}{8}$ thick) and used in an outside or winter case, give better satisfaction than any other style hive in use.

FULL SHEETS OF FOUNDATION.

It seems to us that the person who recommends the use of full sheets of foundation in brood frames and in sections has had but little experience in such matters. We have used a good deal of foundation in the Bay State Apiary and much of it was in full sheets, and have bought hundreds of colonies of bees whose combs were built on foundation. In nearly every case where full sheets were used in the brood frames, it had sagged and stretched to about half the depth of the frame, forming oblong cells, which the bees would not utilize for either honey, pollen or brood. It was practically worthless, and just that amount of space for brood rearing and storage lost to the colony. We have in our bee-house many combs of this description that will be melted as they are of no use, or in other words are worthless.

Among the brood combs purchased were quite a number that were wired, but this did not prevent sagging and stretching.

The person who introduced "wired foundation" should not be credited with doing the beekeeping public a benefit. Wire in brood frames is an injury to any apiary, as well as a nuisance. A strip of foundation, say one not over two inches wide is all that should be used in any brood frame. Just enough for a comb guide is all that is needed. I have sometimes placed frames of comb built on foundation in the centre of a brood nest of a large colony for the purpose of getting eggs for cell-building, and in some cases have waited more than a week for the queen to deposit eggs therein. It seems queer that a queen bee can tell a comb built on foundation from a natural one, yet it is a fact that queens will not use such cells till obliged to do so; when all other combs have been filled with eggs, then the foundation is used.

Now about full sheets of foundation in sections. I have just been eating some of Mr. Proctor's honey of which mention is made on another page. Mr. P. used full sheets of foundation in his sections and this "fishbone" division is very easily found running through the entire comb. Now who wants to find something in his food as tough and indigestible as leather? For one, I do not believe there is anything gained by using full sheets of foundation in either the frames or in the sections. When beginners call here they always ask me how much foundation I use in the frames and sections; they are informed in accordance with the views above stated. A small V-shaped piece is used in the sections and pieces about one or two inches wide in the brood-frames. One reason given for using full sheets of foundation in brood-frames is to prevent the bees from building too much drone comb. Let the bees build a little drone comb. There should be more or less of it in every colony. If there is too much such comb in the hive, destroy it. This can be done at a time when the bees will not replace it with more drone cells. When the bees commence to drive the drones out the hive at the close of the early honey har-

vest, then cut out all the drone comb and the bees will replace it with worker comb.

CAN IT BE TRUE?

FRIEND ALLEY:—Did you know the D. A. Jones Company have "gone up?" Guess your article in Oct. API "knocked him out."

The above information came from a friend. I really hope there is no truth in the report. What was said in the API, of course, had nothing to do with it.

I hope Bro. Jones will soon be on his feet again and that his favorite paper will continue to reach us.

THAT ARRANGEMENT OF DR. C. C. MILLER'S FOR GETTING QUEEN CELLS.

Dr. Miller wanted to know sometime ago how many had tried to get queen cells built under a colony of bees. I tried it several times and got no cells. The bees would not even rear the brood in the combs when arranged as the Doctor advised. Every egg, larva and in fact, all the brood was removed. The colony we used was a strong one and covered all the combs in both hives. The Doctor is a little off in the way he rears "nice queen cells."

BUCKWHEAT HONEY.

D. F. Lashier, Hooper, Broome Co., N. Y., has one thousand pounds comb buckwheat honey for sale.

CORRECT DEFINITION OF PUNIC.

Thos. William Cowan, F. G. S., F. L. S., F. R. M. S., etc., etc., etc., has given the beekeepers of the world what he says is the correct definition of the word Punic. Thomas William is wrong, and decidedly so. North Africa swarms with black bees from Egypt to the Atlantic, all being *Apis niger*. Punic when applied to bees indicates a variety and means simply "black bees."

"Be sure they are Carniolans" is the head line of an article in one of our exchanges. While the author treats the subject in a candid and fair manner, it is evident he has not investigated the matter sufficiently to be sure he knows what he is talking about.

If well posted he would not say they are *dark* Carniolans crossed by Italians. We here respectfully suggest, before accusing us of selling Italian-Carniolan hybrid bees for golden Carniolans, that our method for producing this strain of bees be tested. If golden Carniolans cannot be produced by the method we have given in the API, then you are at liberty to call them a humbug.

The golden Carniolan bees like the Punics, will take care of themselves.

NORTH AMERICAN BEE-KEEPERS' CONVENTION.

As previously stated, the meeting of the North American Beekeepers' Association will take place at Albany, N. Y., Dec. 8 to 11. Our President has been working hard, and has secured reduced railroad rates from Chicago and the Mississippi river, and from the South. The meeting promises to be the grandest in the history of the association, and we hope the west will send a good delegation. Besides personal members' attendance we expect every local and State association to send one delegate or more.

This will be a grand occasion for western bee-men to become acquainted with the noted beekeepers of the East, nearly all of whom will attend this meeting. Beekeepers desiring to attend will please send their names to either the President, Mr. P. H. Elwood, of Starkville, N. Y., or to the undersigned, as we intend to publish a full list of those that are expected to be present.

C. P. DADANT, *Sec.*

Hamilton, Ill.

THE AMERICAN

APICULTURIST.

A Journal Devoted to Practical Beekeeping.

VOL. IX. DECEMBER, 1891. No. 12.

IMPORTATION OF BEES, ETC.

There has been a marked disposition on the part of a number of apicultural writers to oppose all importation of bees; there certainly can be no good reasons given for such unprogressive ideas.

It may be well enough to say that there is no further use of importing the Italian and Carniolan races that have been improved and made better by having been carefully bred from selected specimens under the superior skill and patience of American apiarists, till our selected American bees are superior to any bees in Italy. A little good sense and judgment is as useful along this line as in any other department of business. The man that would not engage in importing Italian queens and breeding from them because he imagined that imported stock was an improvement, would be thought badly behind the times.

But progressive apiarists will continue to import *new* races of bees and give them a fair trial as long as there are new races brought to light in the darkest corners of the earth.

When Italian bees were first imported to this country it was an experiment pure and simple, and they were denounced as "humbugs" by many people without knowing anything practically concerning them. The first of these bees I ever saw were about fourth class hybrids and cost $25 per colony. I then and there set down the Italians as an unmitigated "humbug." But after that, I met with the race in its best estate and I changed my mind toward them sufficiently to give $10 for a queen and handful of bees, which I built up into a strong colony and thence commenced my career as a *modern* beekeeper. At that time and for years afterward the Italian was believed to be a pure race of bees, and at the start I shared in this common belief. But, being a close observer of all matters pertaining to bees, I soon discovered that when breeding from imported queens I could find none that did not "sport" in a way that convinced me that the Italian bee was a hybrid, and I was the first American writer who disclosed the fact to the public, as a review of the old files of the *American Bee Journal* will show. I was opposed in my review by many at the time, and supported by none. But it was noticeable that the "three band test," followed rapidly on the heels of my announcement. Now no reputable writer would venture to speak of the Italian as a pure race of bees. In those days I owned one imported *mother* that "sported" in her offspring both worker, drone and royal progeny in a fashion that opened up a new field of study to me. I discovered specimens among the worker progeny that were pure *yellow bees*, minus any stripes, bands or dark veins, and other specimens as black as night with broad short abdomens—the very picture of what I have since seen in the new "Punic" race. I inferred from those outcropping specimens that the Italian was a cross, of long standing, between

a pure "yellow" and a pure "black" race of bees, and I so published my convictions in the *American Bee Journal*.

Some smart folk tried to stir up some fun at my expense at the time, but now the pure "black" race of bees in the new Punic *Apis niger*, has been brought to light, "black as jet," and are actually now on trial in hundreds of apiaries in this country. And I have never lost faith in the forthcoming "pure yellow bees." They are going to be discovered, and the man who first procures them will need no machinery to "boom" them. The pure yellow bee will be taken without the asking. There are more chances in favor of importing new races of bees than most people are aware of. Before the yellow races of bees were brought into Kentucky no person had ever seen a honey bee working on the red clover. Its luxurious growth in the blue grass belt puts the blossoms beyond the reach of the native black bees. The Italians however, visit the blossoms of the first as well as the second crop of bloom every season. The Italians also work on the iron weed bloom which is never visited by the native black bees. There are possibilities connected with the newly introduced Punic bees that cannot be known till these bees are tested.

Why may not these "little bees" find their way into flowers loaded with nectar, that are inaccessible to the larger races. On this account the trial of the new races is a matter of much interest to me.

ABOUT THE CARNIOLAN BEES

much wild fuss has been made. The idea has taken hold that the Carniolan must be a *pure race*. In my opinion nothing is farther from the facts. I procured an imported queen directly from Mr. Benton two years ago, and though her worker progeny were uniformly dark, only some of the aged workers showing slight patches of rust color, not yellow, on the first segment of the abdomen, when I came to breed from her the young queens were far from uniform in color. Among the first brood of young queens reared there was one nearly as yellow as the queens of my light colored Italians; and when she was mated her workers were just like well marked Italians. One of the features noticeable in these bees is the fact that they never deteriorate in breeding like other bees. Of the number of colonies of these bees that I have handled not one of them has *slid back* into colonies of dingy hybrids so commonly met with in nearly all Italian apiaries. I gave two Carniolan queens to a friend of mine who lives in a black-bee region, and he has reared queens from them, and he says that they hold their grip of yellow blood against the black bees much stronger than do the best types of the Italian race. This would be beyond belief to me, if I had not seen it for myself. Introduce some Italian queens in an apiary of black bees and leave them to fight their own battle for color and the result has no uncertainty about it. The black blood will predominate over the yellow till but a trace of the yellow will be visible.

But once the Carniolan become yellow in color, no influence seems to force them down.

But to deal fairly with them and all other races of bees, I have found the Carniolan bees especially in their Australian dark dress, more inclined to swarm, and harder to manage when they swarm than most races of bees that I have handled. But as they become American bred this undesirable feature in their make-up disappears in a measure at least.

THE LITTLE NIGGER PUNICS

may be no good when thoroughly tested, but as they stand before the judgment bar of unprejudiced apiarists untried, they exhibit peculiarities not seen in any other bees heretofore introduced into this country. Their small size, solid color in a state of purity, and their quick movements,

quick as a flash, are points that must interest any close observer while he watches the outcome of the little black strangers. I have made it a point to test for myself all new races of bees. It has cost me some money to do it, but the interest I have felt in the enterprise, and the pleasures I have derived from the experimentation, have been ample compensation. I now have a Punic queen, and anticipate much pleasure in testing her workers next season.

G. W. DEMAREE.

Christiansburg, Ky.

Many thanks, Bro. Demaree, for the way you have treated this question of new races. You have given the beekeeping public the best article on this subject of new races that has been written by any one.

The readers of the API will observe that Bro. Demaree's experience with both the Carniolans and Punic races has been the same as our own.

The position the API has taken on this question is strongly endorsed in the above communication. What says the reader?

THE DRONE-AND-QUEEN TRAP.

I wonder if all the readers of the API fully appreciate the advantage of the drone-and-queen trap? I should be very loth to go back myself to beekeeping without it. After using it for several seasons, I regard it as indispensable, both for catching drones, and constructing new colonies. A good deal has been said lately about devising a self-hiver, and the inventor of this trap has been working on that idea. But I think the trap is one of the very best hivers; as good as I want. I have not observed its workings in a large apiary, for I keep only about eight colonies, just for fun and science, and all the profit I can get out of them. But a man who has but few swarms come out, and does not spend all his time among his bees, is more anxious than any one not to lose any of them. I used to keep a long ladder and hiving-box in readiness, and have the fidgets every fair day in the swarming months, lest some of my pets would get away from me. When I wanted to go away to spend the day, or two days, I was haunted with the fear that my bees would swarm during my absence. But now I have stowed my hiving-box and pole in the barn chamber as relics of the days before Alley's queen-trap. And I go off for the day with a serene mind, certain that the bees can not get away. Sundays have been, heretofore, my worst days; for bees like to swarm on Sunday. My duties on that day being in the pulpit, it is a great strain on my faculties to be standing up on a fair day preaching the virtue of resignation, and know that at that very moment my treasures may be winging off to the wild woods, and it is a test of a man's religion to which he ought not voluntarily expose himself, to come home on a Sunday noon and find his earliest, biggest, and best, swarm of the season (dollar queen and all) up in the top branch of an elm tree sixty feet high, and nothing to be done but pray or say something bad. But all that is passed in my case. For a year after buying my first trap I kept it as a kind of curiosity, not half believing that it would be a practical thing, and especially doubting that the bees would make much honey through those narrow slits of zinc. But this last season I had them on every hive liable to swarm, and they made a fine amount of box honey, no difference being perceptible. I have Dr. Tinker's best perforated zinc on mine, zinc that is mostly holes, and the bees ventilate my (Bay State) hives as effectively with the traps on as without them. An instance or two as to their use. One very hot morning in June, 1890, I had gone to a neighbor's to breakfast (my family being away), and, while seated at the table, a neighbor sent word to me that my "bees were swarming." I returned and found a peck of bees hanging serenely on the

outermost tip of an elm tree, at least fifty feet from the ground, and wholly out of reach. But I was serene too, for I ran to the trap, and found the queen walking around behind the wires. All I had to do was slip the old hive to a new position (or tuck it in some out-of the-way nook until the bees were hived, so that they would not return into it); put a prepared hive in the old position; place the trap with queen in it on the new hive; and after the bees had got partly into the new hive, draw the top slide off the trap, and dump the queen and trap full of bees before the entrance of the hive. I tell you it was a good deal "happier sight" to see that cluster break and return to the hive than it usually is to see the "bees swarming." When I leave home for the day I draw the pin in the trap, and go away sure that if they come out they will come back again, and we can try it another day. This last season on two Sunday noons I came home and found my bees clustered on my neighbor's apple trees on the main street of our village, and they came back by a magic that was without observation, because I had the all-important queen-trap. My advice to the small apiarist who keeps bees as a side pursuit, or for pleasure is, do not try to get along without the queen-trap. I would like also just to mention another convenience which I think I saw first mentioned in the Api and that is, a wire cloth cover for the top of the frames in winter. Take some strips of wood seven-eighths of an inch square and make a frame the size of the top of your brood-chamber; put a cross piece through the centre so as to make two panels in your frame; then nail wire cloth on one side of the frame, and put it over the hive *wire cloth up*. That makes an air space almost an inch deep on top of the frames, in which the bees can cluster and move freely over the frames. At any time in the winter you can lift the cushion from the wire cloth and look at your pets without disturbing them at all. You can put honey-comb or syrup, or candy, on top of the wire, and it makes the best of feeders. I value this device *very highly*, and I know it favors good wintering, and good watching which is winter-fun with bees.

Rev. D. D. Marsh.

Unionville, Conn.

MAN PROPOSES, ETC.

In this case it was a woman who proposed.

Oh! bless you. not in that sense. I've been married for years, and this was of a very recent date.

I meant it this way:

You see I found climbing trees had its barky side, so to speak, a side that bristled with difficulties, and was not pleasant to contemplate. So during the preceding winter, that season in which the beekeeper does all the "contemplating" there is to be done, I shrank, as it were, from this tree topic.

I finally wrote to our friend, Mr. Alley, and explained some of the terrors that were racking my otherwise placid spirits.

He mentioned the fact—or else some one else did—I don't remember who—that I had better try a queen-trap, and see if I would not enjoy my beekeeping better, and at the same time preserve the tops of my tall oak trees, that were rapidly becoming scrubs, from continually being sawed off at the tops.

I felt relieved, and could those grim oaks speak, I think they would echo my state of feeling.

I sent for a trap.

It came.

I looked it over, pronounced it just what it ought to be, laid it up safely, oh! very safely, on the highest shelf in the wardrobe, and sung the rest of the winter away.

Spring came. It may hardly seem credible, but it really did.

My bees began to multiply, and one

warm, sunny day, I heard—oh, goodness gracious! where is that trap?

All the lobsters that ever came out of a pot, never were as red as my face as I flew up and down, after that trap.

Queer, is it not? that you never *can* remember where you put a thing, just when a swarm of bees are coming out.

They came, went off into a neighbor's yard, and I after them.

An hour or more later I came into the house again, to search for that trap.

I searched by spells all summer.

Meantime I sent for a self swarmer, and that I laid in a prominent place and kept my eye on it.

It is December now, and I have found the Alley trap, all right, just where I had put it, but the season has gone by, and I have not a mite of a report to make as to the effectiveness of either the trap or swarmer.

Looks as if the joke was on me, doesn't it?

But it is not. It is on the bees, for they did not swarm again all the summer.

And now, I am to address the Eastern Iowa Beekeepers' Convention, at Detroit, Iowa, and what shall I say to them on this subject?

A woman can't keep bees if she has to climb very tall trees. I've demonstrated that myself and if she cannot make a success with these queen-catchers—? What then?

Oh! why didn't I know where I had put my drone trap before my one lone swarm came out?

Echo answers, why?

KIT CLOVER.

INTERESTING EXTRACTS BORROWED FROM OUR EXCHANGES.

FROM GLEANINGS.

It is now approaching the time to start another crop of bee-journals. Perhaps a suggestion to prospective editors may not be out of place. If you think there is a mint of money in bee-journalism, you may be disappointed; and if you think it will advertise your supply business, and lead you on the highway to success, you may be disappointed again. At any rate, do not put out the first edition poorly printed with poor ink on poor paper. If you do, its doom is sealed at once. Beekeepers as a class have come to be quite fastidious.

It has sometimes been doubted whether it is necessary to go to the expense of importing queens, the argument being that we can breed at home a great deal better stock. This may be true; but the average home-bred queens, in our experience, are not quite as good for real business. Here is a letter that speaks for itself, and which came unsolicited:

MR. ROOT: — The best imported queen arrived in good shape the day after being mailed at Medina. I introduced her successfully, and her progeny have now hatched in large numbers, notwithstanding her being introduced so late in the season. They are also far better workers than my five-banded stock, especially on cool days.

As we have reiterated before, stock that is bred for color is pretty apt not to be equal to that which is bred for business, and where color is made entirely secondary.

FROM CANADIAN BEE JOURNAL.

A new bee paper called the *Journal* of Winona is started in Minnesota. I wonder if the editor knows what kind of a contract he has on hand? Unless he possesses almost superhuman advantages financially and intellectually, as well as a vast amount of experience, it is almost an impossibility that he will reap much return for his labor. There is room for a certain number of bee journals, but the old stand byes that have been for years before the public are not making a fortune. No doubt all the journals should receive more patronage than they do, because the more bee journals a beekeeper takes, if he reads them, the better he is prepared to manage his bee business successfully.

While we wish our new-comer every success, and extend to him the right hand of fellowship, he must not be disappointed if he finds he is just launched into a mere pasture where he has to pick and pull for a living as well as other mortals.

FROM DAILY PAPER.

No need of bees. "Sugar honey" takes the place of the genuine product.

At a recent meeting of one of the foreign societies of applied chemistry, reference was made to a product which, under the name of "sugar honey," has been introduced as a substitute for the natural produce of the bees. The substitute is sold at a much lower price, and is said to consist of invert sugar, water and a very small quantity of mineral acids and matter.

It is said to possess the characteristic taste and odor of bee honey. Neither dextrine, cane sugar nor any other abnormal constituent was detected by direct investigation or by submitting the "honey" to fermentation. One of the chemists present at the meeting expressed an opinion that if the manufacture of this article was taken up by capable hands, the work of the bee in respect to honey making would become superfluous and be chiefly of value on account of the wax produced.

NEW YORK SUN.

Brown's Queer Bee Tree.

GALETON, PA., Oct. 31. Joseph Brown, who works in the lumber woods near here, came into town yesterday and got William Squires to go with him to Bald Hill to help him gather the stores from a bee tree he said he had discovered on his way in from the woods.

"I heard the bees buzzing in the tree while I was five rods away from it," Brown said, "or I wou'd not have discovered it."

The men took with them three patent pails to hold the honey, an axe to cut the tree down, and a lot of sulphur to burn in the hollow for the purpose of smothering the bees. Brown led the way to the tree, but they could not hear the humming The tree was hit with the axe and the humming struck up immediately and so loud as to startle. the two men. They found near the bottom of the trunk a hole where the occupants of the tree had made their entrance and the sulphur fire was started there, and its stifling fumes went up into the hollow tree. For a time the buzzing inside was terrific, but gradually grew fainter and fainter as the sulphur had its deadly effect, and finally ceased entirely.

"Now we'll cut her down and gobble that stock of honey!" said Brown.

The tree was chopped down, and when it fell and displayed its hollow interior the two bee hunters were not only surprised, but disgusted Instead of layers of rich honey they were greeted by the sight of a tangled mass of rattle snakes, which had been suffocated by the sulphur fumes. The snakes had chosen the hollow tree for their winter home There were fifty-eight large rattlers and eight black snakes, a puff adder and three copperheads in the collection. The noise Brown had thought was the buzzing of wild bees was made by the rattling of rattlesnakes in chorus as he was passing. Brown and Squires will get about two gallons of oil out of the rattlesnakes, which will net them at least $100, so their queer bee tree will pan out a good day's work after all.

WEEKLY CALL, SAN FRANCISCO.

Mr. J. Gregg, the apiculturist of this city, says the Visalia Delta, recently purchased a queen called the Punic bee, its generic name being *Apis niger*. This bee is black as char-

coal, and is said to be a great honey-maker, building a whiter comb than any other species. They are smaller than our native bees, or Italians. They are the tamest bees known; the only time it is possible to get them to sting is when the swarming fever is on They have been rubbed on the back of a person's hand and then will not sting. This is a great desideratum with people who have not gone into the business through fear of injury by stings. It is said the queens are very prolific, hard workers, live longer, fill and seal sections fuller and cap them whiter than any other kind, build up from one to twenty and possibly yield 1000 pounds of surplus honey.

This species of bees was discovered in Africa in the Sahara Desert. They were carried to the coast by natives. The first importations cost $75 apiece, but pure mated queens can be had now for $5 apiece. Mr. Gregg is raising twenty young queens and ten are laying. The second generation has gone to work and the third will be ready to fly in about two weeks. If the bees turn out what the importer claims for them, Mr. Gregg intends to supplant his present colonies with Punics.

Mr. Gregg has 150 stands of bees, and he will harvest about 7000 pounds of honey this year. Last year his bees made 10,000 pounds, and he realized about $1000 from the business. Alfalfa has been scarce this year, which is the cause of the small crop. Mr. Gregg says there is always a good demand for honey, and that he could have sold 20,000 pounds this year if it was to be had. He gets 12½ cents a pound for his honey. Mr. Gregg makes his own hives, boxes, foundation for combs, etc., and has a warehouse on his property for the above purpose. He has been in the business nine years and the sale of honey brings him in a good income. The bees do not require much attention. Mr. Gregg furnishes the hives and the bees do the rest. He calls his bees little hustlers. Mr. Gregg commenced the business with four stands. His first bees were the common brown bees and were obtained in the woods. He Italianized them, and, from a modest beginning he now owns 150 stands.

GLEANINGS.

The last *Bee-Keepers' Review* is an excellent number. It discusses the subject of house apiaries. In our judgment, the best article on the topic is from the pen of James Heddon, and it covers every point. Among other good things, he said: "Never let any one advocate the use of any hives, frames, cases, or brood-chambers that are fixed within the building."

You are quite correct, Mr. Heddon; and you might have added that they prevent the bees from escaping into the room, for all outside hives are supposed to be bee-tight. One great reason why the house apiary was abandoned, was because the hives or compartments for holding the frames are fixed to the sides of the building, and it is not easy to make these so they are bee-tight.

Again he adds: "The annoyance from robbers is the one great cause of irritability among the bees of an apiary; and I want to tell you that, if you have a colony that is so confoundedly mean that you expect to be stung, even when using the smoker, put them in the house apiary and the bees will behave perfectly." I have noticed this very thing myself; and, in fact, it is a very rare thing for bees to sting inside of a building. To find themselves suddenly in-doors takes all the fight out of them.

In winding up, Mr. Heddon concludes: "On the whole, I think the house apiary, when rightly made ang managed, is, in many localities, a thisy of comfort and profit. It is an ear; thing to pack colonies in for winteat and after being packed, I can see what splendid advantages can be gained from stove heat during extremely cold weather."

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HOUSE APIARIES.

It is a wonder that more attention has not been given to this most important subject. Early last spring the need of a house for keeping bees and one so arranged that it could be warmed by heat of a stove was more apparent than ever. It was then that the plans were made for such a building to be erected in the Bay State Apiary before another cold winter set in.

Well, the house is completed and nearly all the colonies it will accommodate (about thirty) placed therein.

This house was not devised wholly for the purpose of wintering bees, but more particularly for "springing" full colonies of bees. It was not intended in the first place to heat the room in winter, yet as James Heddon suggests, it may be warmed up during very cold weather, say when the temperature outside is near the zero point.

Now a word about how the hives are arranged so that the heat will be economized and at the same time sufficient ventilation given the bees while confined in the hives.

There are two rows of hives on each side the house; one row above the other. The top hives rest on a shelf, sufficiently elevated to admit of plenty room for handling bees, combs, etc., under it; there being about four feet of space between the shelf and floor.

A round entrance hole, one inch in diameter, is made for each colony as a passage way out of and into the hive. Now instead of placing the hive against the boards to prevent the bees from getting into the room, about three inches of space is left and a frame covered with wire cloth is used to furnish the needed ventilation, and to prevent the bees from getting into the room. The bees will be closed in, or rather the outlet through the side of the building will be closed by a cork stopper, thus keeping out the cold when the temperature is so low that bees cannot fly.

The building is eight feet wide, twenty feet long with six feet posts; sheathed overhead; while the floor is of double matched boards with thick paper between. This effectually prevents drafts of air at the bottom and through the building.

The necessity of such a house as the above has long been felt in the Bay State Apiary. It is necessary to rear queens, or rather start them early in May. About the 20th of that month, a long cold easterly storm usually sets in, and holds on about a week. There is much work that the queen dealer must perform, let the weather be favorable or otherwise, or all queen cells as well as queens will be destroyed.

The work of this sort always done out-of-doors will now be performed in that new beehouse, as there is plenty of room between the rows of hives for conveniently handling the combs or hives. About the 20th of March, or as soon thereafter as the bees have had a cleansing flight, the room will be warmed and the temperature kept as high as 70° until the weather outside is so warm, or the hives so full of bees that artificial heat will no longer be needed. By this method there is no doubt that all colonies having good queens and plenty of pollen will be advanced at least one month.

Water will be supplied from a sponge placed on the wire cloth at the front of the hive, or on the screens over the frames.

Now if this arrangement is not practical, will some of the readers of the API make suggestions or criticise the theory.

Anent Golden Carniolans. J. A. Green, in *A. B. J.*, wants to know, if they are pure, and if it is the natural tendency of Carniolans to turn yellow, why they don't follow out that natural tendency in their native land. Don't ask impertinent questions, Jimmie. DR. MILLER.

This question can be answered by asking another. Suppose the word *Carniolans* in the above is made to read Italians, then how does it work? Why is it if the true color of the Italion is yellow that they do not follow out the natural tendency and be all yellow instead of badly marked hybrids?

Ah! now a prominent beekeeper travelling in Italy, has discovered the fact that bees of that country are not yellow-banded at all. Here is a nut for the know-it-all to crack. The readers interested in the question of yellow Carniolan bees are kindly referred to the article of Mr. Demaree and the extracts from a private letter from a prominent English beekeeper, all found in this issue of the API. Those who read this copy of the API carefully, if fair-minded, will say that the API is well sustained in its opinions, and in the statement concerning the tendency to yellow markings of the Carniolans was not the result of being crossed in the Bay State Apiary.

A prominent and probably the best posted person on bee culture, England has, writes to a friend in this country as follows:—"Alley and you may think the bees of Carniolan queens are dark with no trace of yellow when pure The fact is, so many yellow bees have been imported, Italian, Cyprian and Syrians that very few pure Carniolan bees are found. *You are right* to call them yellow Carniolans, but wrong to call them *pure* Carniolans. The best and nearest Carniolan bees Benton sent me produced yellow bees and queens."

There, friends! how does that look? Does not this satisfy any reasonable person that it is an easy matter to breed a strain of yellow bees from dark Carniolans?

Does any one see anything in the above that would lead them to believe the yellow Carniolans were produced in the Bay State Apiary by crossing the dark Carniolan and Italians? Haven't the readers of the API been told repeatedly how easily any one can produce yellow Carniolans from the dark strain?

Any one can do it and not use one particle of Italian blood in the process.

J. A. Green has sent an article to a beepaper regarding the yellow Carniolans. He claims he has completely knocked the API arguments out. A person of that style should have the entire field to operate in. His argument is as silly as it is weak, and in nowise meets the points under discussion. 'Tis the same old story. He accuses us of mixing the Italian and dark Carniolans in order to produce the yellow Carniolans. Well, what can the man do? He has had no experience to meet the points made and must resort to abuse and vile epithets.

How many readers of the API have discovered the fact that when two persons get into an altercation over most any subject, the party that gets beaten shrieks out, "you're a liar."

This is the case with Green and several others who have tried to discuss the yellow Carniolan question. Nearly every one has intimated that Alley is a liar and a fraud. Those who have purchased yellow Carniolan queens are with the API in this matter. The cranks are out in the cold.

J. A. Green says in one of our exchanges "that he does not consider the columns of a public journal a proper place for abuse and vituperation." He then goes on in the next paragraph and gives the editor of the API a terrible raking without regard to truth.

Speaking of Punic bees the *Canadian Bee Journal* remarks:

We are fully convinced that Mr. Benton should be reliable authority on the Punics, as he was the first to send them from Tunis.

Yes, Mr. B. was first to start them from Africa; but how far did he get with them? Wasn't Mr. B. taken sick soon after he shipped the bees? and didn't the Punics all die before his recovery?

Well, there are such bees as Punics notwithstanding the fact that one of the editors of the *British Bee Journal*, T. W. Cowan, never saw them.

We are much amused at the booming of the so-called "Punic bees," in America. I am pretty well acquainted with the bees of northern Africa, but do not know of such a race as "Punic;" nor is there such a species as *Apis niger* known to entomologists. T. W. COWAN.

The above is from the *American Bee Journal* of Nov. 12.

There are people who would believe that two and two make five, and would so advertise it should T. W. Cowan say so.

There will be in the spring of 1892, five hundred colonies of Punic bees in America.

Though the writer has never been stung by Punic bees, they will sting all the same. No bees, however, are so easily controlled by a small amount of smoke as the Punics.

A few items have lately appeared in the different bee journals regarding the introduction of old virgin queens into full colonies, also something has been said about introducing virgin queens to colonies that have long been queenless. With the use of tobacco smoke there is not the least trouble in introducing virgin or fertile queens in either of the above cases. It can all be done in one minute with tobacco, while by any other process, it requires a week's time, and then such methods are unreliable.

Some one has taken hold of the *Canadian Bee Journal* who must have had some considerable experience in running a paper. That a great and marked improvement has been made the last few months no one who has read Jones' paper of late will deny.

IT IS SAID

That the November issue of the *American Beekeeper* is as much of a booming circular as was the August API. Well, what of it? What says Bro. Hutchinson?

That we are about to pass through an unusually hard winter. Ar'n't they all hard enough?

That some of the croakers always make such predictions. Let them predict calamity winters as often as it suits them.

That the North American beekeepers' convention will be a big affair. So let it be.

That all who can should attend. Suppose they will do so.

That the thin, double-wall winter case as used in the Bay State Apiary the past ten years is now coming into general use. That is natural.

That two of the largest bee supply dealers in the world are booming them in their (official) bee publications. Where else should they boom them?

That these hives winter bees much better on summer stands than any cellar or beehouse.

That wintering bees in cellars will soon be an unheard-of thing.

That spring dwindling is the natural result of wintering in a temperature above the freezing point.

That they raise large heads of lettuce in the state of Washington as shown in the cut on page 858, Nov. *Gleanings*.

That Edmund K. Belcher has an idea that when tarred paper is placed

around an apple tree, the apples have a "tarry" flavor, and that the honey gathered from blossoms from such trees also has a "tarry" taste. To us Basswood honey always had a tarry flavor. Wonder if tarred paper is used on those trees? Doubtful.

That a good description of the "Home of the Honeybee," illustrated, may be found on page 848, Nov. *Gleanings*. I had rather see the plant than a picture of it. Think, however, the "birdseye" view will have to do us.

That *Gleanings* is getting all the "backing-up" statements it desires regarding the salt remedy for the nameless disease, and it is all the API claimed.

That the first bees brought to America landed in Boston in 1670. We found our first colony within twenty miles of the place, where the first swarms landed.

That Prof. Cook and A. I. Root will spend the winter in California.

That Henry K Staley has an idea that electricity can be made practical in bee culture.

That sugar manufactured from beets is unfit for winter stores for bees.

That all the bee escapes have not escaped a good deal of free advertising. No doubt this device works well in the absence of better methods.

SPECIAL NOTICE.

We wish to say to those of our subscribers who have not renewed their subscription that we are ready to discontinue the API to their address when notified that it is no longer needed.

The meanest men in the world are those who will not take a paper from the office and compel the postmaster to notify the publisher that it is not called for. We have found four such men since Jan. 1, 1891. Just one cent invested in a postal card would have saved their reputat on at least as far as we are concerned.

IT MIGHT HAVE HAPPENED.

(Written by a well-known beekeeper.)

The scene is a country blacksmith's shop, one of the few establishments not materially changed since our grandfathers, and grandmothers too, for that matter, delighted to stop on their way to school to watch the sparks fly from the red-hot horseshoe. As it was in the haying season the shop was occupied by a farmer getting his rake mended, and two or three pensioners.

"Hullo!" said Jake Rugg, "Here comes Tim Beeman."

All eyes glance up the dusty road to see the tall, loose jointed person referred to. His real name is Timothy Bemis. He is the village naturalist, of average ability; I mean average in anything but beekeeping, in this he holds the world's record. He dotes on his bees, it is even said that he has a colony in his bedroom to lull him to sleep.

Tim also has another characteristic, namely, story-telling. If the peculiarity of his stories is considered, or their length, then, like Tim himself, they are above the average.

"Say Tim," remarked Jake casually, "what is your latest in the bee line?"

Tim straightway answered that he had an adventure the day before. He was pressed to tell it. I cannot write Tim's way of talking, I will merely say that he has a strong nasal accent.

"I went down to Willard's wood-lot yesterday to look for that prime swarm of Italians I lost last Saturday. Jimmy Burke said he heard the swarm go over his head, and you know Jimmy lives between me and the woods.

"Wal, I spent all the forenoon looking for that swarm, but did not get even a smell of it. Finally, about grub time, I came across that old dead buttonwood nigh the white birches. looked at it and saw bees flying about a hole ten or twelve feet from the ground. I climbed up to examine, and found that the bees were only scouts looking for a home. Just as I

was going down, a yellow-hammer flew out of the tree a few feet above. Thinks I, I will see if there's anything there. Billy Sawtelle you know wants a yellow-hammer's egg. So I climbed to the top,—the old stump ain't mor'n twenty feet.

"I whittled out the hole (Tim's hands are very large) and was just lowering the seven eggs to the ground in my handkerchief, when I heard a buzz. 'Gosh,' says I, 'if there aint a swarm of bees lighting right below me.' You can just bet I sat and watched them bees go into that hole. It was such a lucky thing I couldn't help laughing right out.

"Wal, as you will believe me, they warn't mor'n half in when there was another hum, and along came another swarm right from the direction of Dea. Brown's. 'Jehosaphat,' said I, 'if this doesn't beat all, two swarms coming to this old buttonwood.'"

"See here, Tim," broke in the blacksmith, "I thought that bees never chose a dead tree for a home."

"P'r'aps so, p'r'aps so, probably this was an exceptional case, I cal'late bees know what they are about.

"Wal, when I saw that second swarm come, I rather expected trouble, and, sure enough, there was excitement soon. What is more, I was afraid they wouldn't allow spectators. As it was, one bee tapped this ear for me."

Tim's ears never had sought close proximity to his head, and to-day his right one stood out like a door in the dark.

"The first swarm stopped going into the hole, and both simply spread over the tree for two feet, and stayed there. Wal, boys, you see how I was fixed, up that old stump with the trunk between me and the ground covered with bees. I can stand stings as well as any man, but I wont shin down over a swarm of bees, let alone two swarms.

"Gosh, I didn't know what to do. I sat there. It was two o'clock and I hadn't had my dinner, that was on the ground where I left it. Yesterday was the best hay day we have had, and there wasn't a tree near to shade me. I had plenty of time to look around.

"It was great fun watching a pair of squirrels in an old oak. I guess that they and the birds took pity on me for they cut up a good deal. It was pretty hot for them though and by three o'clock they were all gone except the yellow-hammers, — they were keeping up an everlasting rattle."

Sam Jenkins here interrupted him; "Come, Tim, hurry up and tell us how you got down."

"You keep cool, I guess if I tell you this story I am going to tell the whole of it. I was up that tree till most sunset.

"About four I thought the bees were going to leave, as they got restless. Another one came up to interview me. It wasn't fair; I had to cling to the stump with one hand, and that tarnal bee dodg'd my other and took me square under the nose. Whew! did you ever get stung there? It makes you sneeze like sixty. When I had sneezed thirteen times I heard a rustle down in the willows, and I saw a partridge scurry out. I found sixteen eggs there this morning. A rabbit, too, that had been smelling of my grub box was scared so that it ran for the underbrush. Wal, it did seem as though everything was free to run but myself.

"I felt like running just the same. That old tree was full of ants. I would just about as soon have bees crawl up my pants as ants. My legs look to-day as though I had the measles.

"Wal, boys, I stayed there till nigh sundown, and might have been home long before that if I hadn't been so gall-darn stupid. There I had some matches in my pocket all the time, and rotten button-wood is the best thing next to 'celsior for smoke. I cut

out a chunk of wood, lit it, and crept down to the bees. You know the old stump is covered with stubs of limbs, and so 'twas easy to climb about.

"Wal, I smoked them bees; they all flew off the tree, and I came down. Wait, I ain't done yet. The bees lit in two clusters, one on the willows and one on the alders. I cut the two branches off, and with one in each hand came home. Come up and see the bees, they are the best swarms I ever saw."

"Say, Tim, when you were up the tree why didn't you spin a yarn and come down on that?"

OUR NEW CLUB AND PREMIUM LIST.

We club the AMERICAN APICULTURIST with any of the papers below named. The regular price of both is given in the first column.

The American Apiculturist,	$0.75	
With Gleanings in Bee Culture,	1.75	1.50
" American Bee Keeper,	1.25	1.00
" The Apiculturist and one sample Drone-and queen trap, by mail.	1.40	1.00
With sample Swarmer,	1.75	1.25
" Thirty Years Among The Bees and Beekeepers' Directory,	1.75	1 00
API and Italian Queen,	2.25	1.50
" " Golden Carniolan,	2.75	2.00
" " Punic Queen,	3.75	3.50

New subscriptions to Apiculturist will begin with Nov., 1891, number, and expire Jan. 1, 1893.

Money for queens need not be sent till the queens are wanted.

Five copies of API one year, $2.50.

Remit by money order on Salem, Mass., P. O., or by check.

Our new illustrated Price-list and Circular now ready to mail. Sample copies of API mailed free.

Address Henry Alley, Wenham, Mass.

Please send us an article on bee culture. Short articles are just what we need for the API.

The API will be sent free to all who will send us one or more acceptable articles. Tell us what you and your neighbors are doing in beekeeping.

A room in which to keep comb honey in good condition should be as dry as possible. During pleasant weather a window protected by a wire screen to keep out bees and other winged insects should furnish ventilation. When the weather is damp the window should not be closed, and a little fire should be started in the room to drive out the dampness. A high temperature will not injure honey. If the temperature could be continually maintained up in the nineties, the quality of the honey would be improved.

As the bees always keep their honey in the dark, it seems to me that the room should be kept dark in which honey is stored.

All supply dealers should handle the drone and-queen traps. Each dealer can in the course of the year dispose of thousands of the traps to his customers.

To facilitate the sale of the traps and present their advantages and practical use, the article of Rev. D. D. Marsh, on page 167, will be put in pamphlet form, and furnished gratis to all dealers who desire to sell the trap. We will also insert in the same pamphlet a 1-page ad. free, to all who will purchase one dozen traps, flat, (price $3) or the same to those who will purchase royalty stamps to the number of 100 (price $5) for manufacturing and selling the traps. Try this, friends, and see what a boom you will have in the sale of goods of all kinds for the apiary.

In this issue Rev. D. D. Marsh tells the readers of the API the advantages derived from the use of the drone-and-queen trap. If there are any readers of the API who would like to examine one of these traps, it can be done by renewing their subscription and remitting twenty-five cents extra. The trap will be mailed, and the API sent one year for the small sum of one dollar. See new club rates on this page

THE APIS DORSATA.

Now that Mr. Frank Benton will be sent in search of this wonderful bee, it may be interesting to know something about them. The extract below is from the "*Beekeepers' Handy Book*," edition 1883.

Very little is known of the true merits and value of this new race of bees ("the *Apis dorsata*" or bee of Ceylon). True, a number of very interesting articles have been written regarding them, some of which extol their good qualities and beautifully picture them sipping from the flowers large quantities of the precious nectar inaccessible as yet to other races; but the facts in the case do not seem to warrant such imaginations even.

From all the information which we are able to glean regarding them, they seem to be rather indolent and shiftless, with no particular "care for the morrow," losing what little energy they do possess when made queenless, and carrying a weapon of defence, which would almost defy a coat of mail.

In 1881, Mr. Frank Benton, agent for D. A. Jones, made a voyage to Java and Ceylon, in search of this race of bees, and after many long and tiresome journeys through almost impenetrable jungles, alone, and thousands of miles from his home and fellow countrymen, he secured two colonies of these bees; but, owing to exposure, over-exertion and the poisonous atmosphere, he contracted an almost fatal attack of the jungle malarial fever, and was unable to give proper attention to the preparation of the bees for their long journey, the result being that they died when they had nearly reached their destination. It is to be hoped that at some future day, other and successful attempts will be made to secure and fully test them. Much credit is certainly due Messrs. Jones and Benton, although unsucessful, for the untiring energy and perseverance displayed in doing their part so well.

CHARACTERISTICS AND MARKINGS OF THE APIS DORSATA.

Mr. Benton, in a letter to Mr. Jones, calls them "wonderful bees as large as queens, blue-backs, with shining blue wings and orange-colored bands under them, having the appearance of great wasp-colored hornets, beautiful but dangerous looking, irritable and very tenacious when excited, and after becoming queenless they would take no care of the brood and soon dwindle away. Again, while very ferocious in their forest home, where nothing but smoke will subdue them, yet they can be handled with no fear and without smoke, when in movable frame hives, provided they are not jarred or breathed upon, and no quick motion made. They build combs four or five feet long and three or three and one-quarter broad, with about one and one-half bushels of bees to the swarm. They do not repair combs readily after being transferred, and seem to inherit many of the characteristics of our well-known *bumble bee*.

Mr. Benton also secured specimens of other races, but did not feel warranted in importing them as he did not consider them very valuable.

Any yearly subscriber to the Api will be given a 3-line ad. free, under the head of wants, exchange, etc.

The same can be run one year for $1.00 in addition to price of Api.

If you have anything to sell or desire to exchange goods, you can do no better than insert an ad. in the Api. Try it.

Send us three subscribers and $2.25 cash and we will mail three copies of the Api one year and present a beautiful golden Carniolan queen to the getter-up of the club.

For six new subscribers and $4.50 a warranted Punic queen will be given the person who will take the trouble to get up a club of that number.

PROGRAM

of the North American Beekeepers' Association, to be held in Agricultural hall, Albany, N. Y., Dec. 8 to 11.

DECEMBER 8—INFORMAL MEETING.

FIRST DAY—WEDNESDAY, DEC. 9.

9 A. M.—President's address.—P. H. Elwood, Starkville, N. Y.

Appointment of committees, and routine business. Question-box.

2 P. M.—The Prevention of swarming.—W. F. Clarke, Guelph, Ontario, Canada. Discussion. Question-box.

7 30 P. M.—The Outlook for Apiculture at the Columbian Exposition.—A. B. Mason, Auburndale, O. Discussion.

SECOND DAY—THURSDAY, DEC. 10.

9 A. M.—Election of Officers. Selection of next place of meeting. Business of the Association. Volunteer contributions. Discussion. "Prices of honey and sugar.

2 P. M.—Can we settle upon two sizes of sections as standard.—C. C Miller, Marengo, Ill. Discussion. Question-box.

7.30 P. M.—The Bees, the Location, and the Apiarist.—G. M. Doolittle, Borodino, N. Y. Discussion.

THIRD DAY—FRIDAY, DEC. 11.

9 A. M.—The Italian Bees. What are the principal points of excellence, and to which qualities should we give the preference?—G. H. Knickerbocker, Pine Plains, N. Y. Discussion. Question-box.

2 P. M.—Some facts not generally known about rendering beeswax.—R. F. Holterman, Brantford, Canada.

ADJOURNMENT.

REDUCED RATES ON RAILROADS.

One and one-third regular fare for round trip. The concession is for delegates and others going to Albany to attend the North American Beekeepers' Convention, Dec. 8–11, 1891, from the following described trunk-line territory:

By the Central Traffic Association from all points in Ohio, Indiana, Illinois, Pennsylvania, as far east as Pittsburg; New York, as far east as Salamanca; and Ontario, Canada, as far north as Toronto. Trunk Line Association of New York, Pennsylvania, and New Jersey, and the Southern Passenger Association, which includes all the principal roads of the Southern States.

INSTRUCTIONS TO PERSONS ATTENDING THE MEETING.

1. The concession is for delegates and others going to Albany from any of the above described trunk-line territory.

2. If the starting-point is located on some small road, or one not in either one of the three trunk-line associations making the concession, tickets should be purchased only to the most convenient place where a trunk-line certificate can be obtained, and thence by direct routes only, through to place of meeting.

3. The going ticket must be purchased within three days before, or not more than three days after, the opening date of the meeting, otherwise no reduction in fare will be made on the return passage.

4. Each person availing himself of the concession will pay full tariff fare going to the meeting, and get a certificate filled in on one side by the agent of whom the ticket is purchased. (The agents keep the certificates in stock.)

5. Present the certificate to the secretary at the meeting, that the other side may be filled in. Certificates are not transferable.

6. On presentation of the certificate, duly filled in on both sides, within three days (Sunday excepted) after the adjournment of the meeting the ticket agent at Albany will return the person to his starting-point at one-third regular fare. The return ticket will be issued over the route used in going to meeting, and will be available for continuous passage only.

VERY IMPORTANT.

7. It is absolutely necessary for each passenger, before starting, to obtain a certificate from the ticket agent at the point at which the going ticket is purchased, otherwise said passenger will be unable to obtain special rate for return journey, and will be obliged to pay full tariff rates in both directions.

8. Delegates, and others availing themselves of the concession, should present themselves at the office for certificates and tickets at least thirty minutes before the departure of trains.

9. Every person attending the meeting should get a certificate, no matter how short the distance, as the more certificates are signed at the meeting, the easier it will be to secure reduced rates another year.

Will say to my friends who have not received prompt replies to their letters that I have been out of the office for nearly six weeks. Have been engaged in outside work. I am now back again and all will receive quick returns in future.

If our friends will send us the full address of enterprising beekeepers we will mail sample copies of API to all.

Alley's Automatic Swarm-Hiver.

Easily applied to any style hive in use. Will catch and hive 99 per cent. of all swarms that issue. Can also be used as a trap for destroying useless drones.

An individual right to make and use the SELF-HIVER will be sold for $5. Sample Hiver mailed free to the purchaser.

We do not wish it understood that every one must purchase an individual right in order to get one of the self-hivers. We mail a sample to all who desire them, for $1.00. If, after that, you need an individual right to make and use them, the one dollar may be deducted from the five dollars, the price of the right to manufacture. County rights for sale.

Per half dozen, flat,	$5.00
Per fifty, "	25.00
Per hundred, "	40.00

Sample Self-Hiver by mail, $1.00.

Henry Alley, Wenham, Mass.

Revere, Mass.

HENRY ALLEY: I hived three swarms this season with your automatic Swarm-hiver. I am away from home all day and found the swarms self-hived when I returned at night. FRANK H. PRESCOTT

A beekeeper living near here bought one of your swarmers and placed it on a hive according to directions, and went out to his work, ploughing. When he returned home his bees had swarmed and were at work in the new hive and all right without any trouble to him.

JOSEPH P. SEWALL.

Cumming, Ga.

LONE STAR APIARY,
Thorndale, Texas, June 9, 1891.

FRIEND ALLEY: Swarming time is now over with me and I take the pleasure to report to you that the Aut. Swarm Hiver is the boss. The first time I tried it, it didn't work. The hive was a portico hive and I could not adjust right. Since then I have used it on hives without portico to my greatest satisfaction. I deem it the best swarming device I have ever seen.

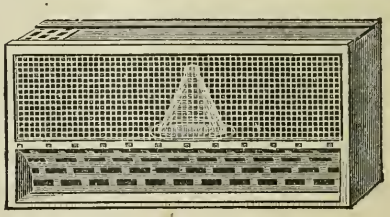
Respectfully yours,
OTTO J. E. URBAN.

Alley's Drone-and-Queen Trap.

SIXTY THOUSAND IN USE.

Prevents swarms from decamping and destroys all useless drones.

R. L. Taylor of Lapeer, Mich., President of the International American Beekeepers' Association has this to say of the trap:



"The drone-and-queen trap I find an indispensable convenience. I should feel like a duck on dry land without it. It saves me LABOR and prevents ANXIETY."

PRICES.

One trap, by mail,	$0.60
Six, in flat by Exp. (one made, seven in all)	2.00
Twelve " " " " thirteen " "	3.50
APICULTURIST one year and sample trap,	1.10

Address,
HENRY ALLEY,
Wenham, Mass.

TESTIMONIALS.

The traps work finely.
CHAS. E. DOW, *Lawrence, Mass.*

You have perfected a valuable device.
DR. G. L. TINKER, *New Phila., O.*

Scientific American Agency for

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